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ABSTRACT

Describing conditions in education as well as those in the larger society that affect education, this eighth annual statistical report focuses on the impact of enrollment changes at the elememtary/secondary and postsecondary levels. Each of the five chapters presents a narrative analysis complementing the data, which is presented in chartbook form. Chapter 1 gives an overview of enrollment trends in elementary/secondary and postsecondary education. Chapters 2 and 4 describe the adjustments made by schools and institutions to shifting population needs at the different educational levels. Chapter 3 takes a special look at the public elementary/secondary teaching force, and chapter 5 concludes the report by presenting the most recent data on the outcomes of schooling from kindergarten through college. Data sources and definitions of selected terms are appended. A related document, EA 014 879, which forms part 2 of the report, contains a description of the activities of the National Center for Education Statistics. (Author/WD)

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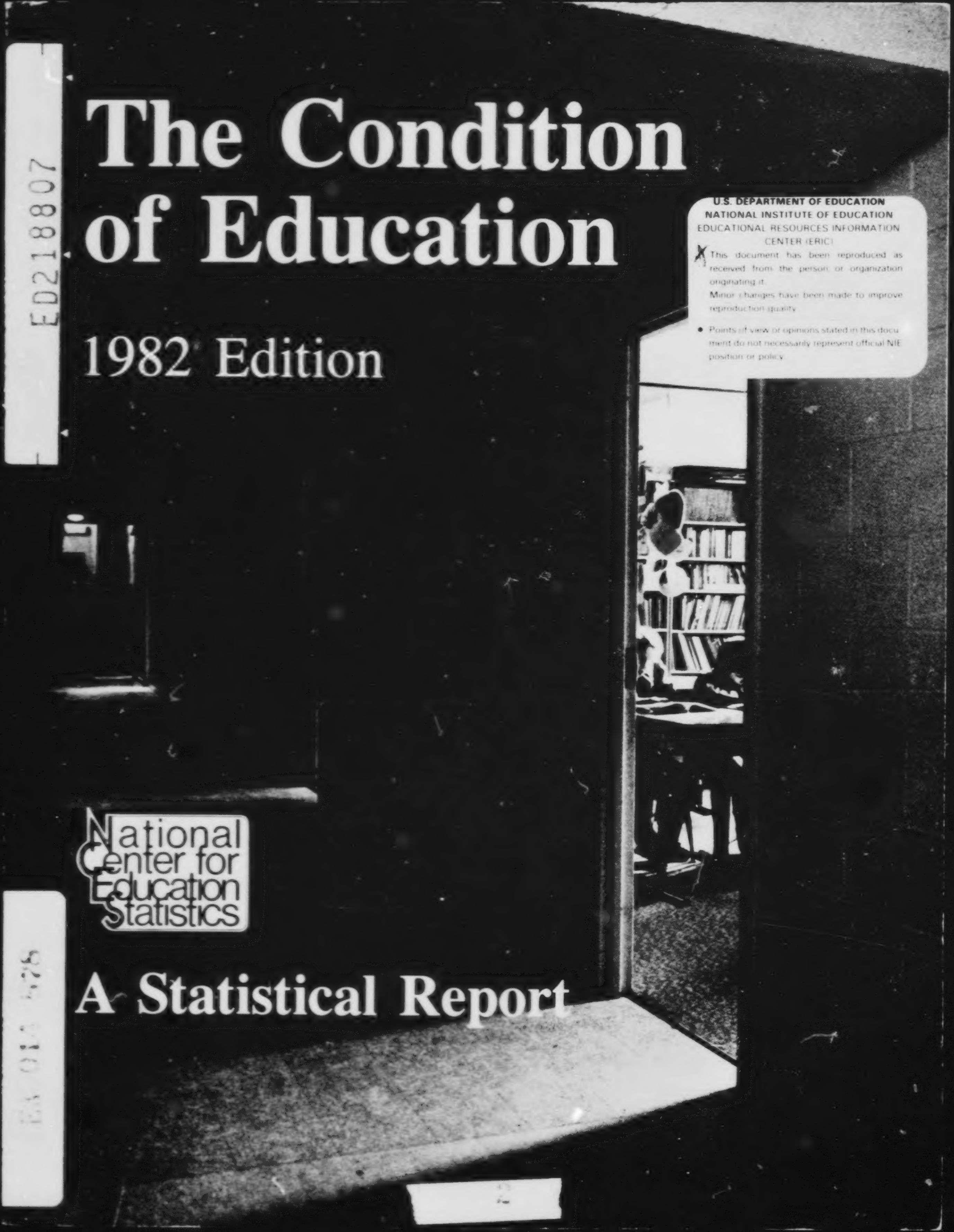

The Condition of Education

1982 Edition

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National
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Statistics

A Statistical Report

On The Inside

Elementary/Secondary Education

- The enrollment upswing projected for the preprimary level in the early 1980's is expected to reach the first grade after 1985. Enrollment at the secondary level is expected to continue its decline throughout the decade (entry 1.2).

- Since 1970, private school enrollment has remained higher in central cities than in other areas. The Northeast region, while continuing to have the highest proportion of private school students, showed declines in metropolitan areas (entry 2.6).

- States in the South received larger proportions of their revenue from Title I for elementary/secondary education than did States in other regions in 1978-79 (entry 2.8).

- Even as average daily attendance declined during the 1970's, expenditures per student increased. But in 1979-80, for the first time, expenditures adjusted for inflation dropped slightly below the expenditures of the previous year (entry 2.10).

- In 1970, teachers under 25 years old represented about 17 percent of the public elementary/secondary school teaching force but by 1980, they represented slightly more than 8 percent (entry 3.1).

- In the spring of 1978, about half of newly qualified teaching candidates were teaching full-time and an additional 11 percent were teaching part-time. Of those not teaching, a majority had not applied for teaching jobs (entry 3.5).

- Teacher shortages exceeded layoffs in bilingual education, industrial arts, physical sciences, and special education in 1979 (entry 3.6).

- While in 1961 and 1966, about half of public school teachers indicated they certainly would go into teaching if they could start over again, by 1981, only 22 percent expressed this positive attitude (entry 3.9).

- Students who had participated in kindergarten performed significantly better in first grade on reading and mathematics than students who had not participated (entry 5.1).

- The gap in reading scores between white and black 9-year-olds closed substantially over three reading assessments. Scores of black 13-year-olds also improved significantly from the earliest assessment so that in the 1975 and 1980 assessments, their average score no longer overlapped that of white 9-year-olds on the same exercises (entry 5.6).

- While mathematical achievement test scores for 9-, 13- and 17-year-olds fell nationally between 1973 and 1978, scores of black 9-year-olds showed significant gains (entry 5.9).

Postsecondary Education

- Increasing percentages of female 18- to 24-year-olds entered the labor force and enrolled in school from 1960 to 1980. By 1980, the proportion of these females who combined work and education approached 15 percent, the same percentage as that among males (entry 1.10).

- From 1960 to 1980, college enrollment of single women 18 to 24 years old more than tripled. In 1980, single female college students comprised 23 percent of their age group, a proportion equal for the first time to that of their male counterparts (entry 1.11).

- The 18- to 24-year-old age group, the traditional mainstay of higher education enrollments, will decrease during the 1980's, while the population aged 25 to 64 years is projected to increase in that period. Increased enrollment of older students could serve to counteract the impact of declining enrollment of 18- to 24-year-olds (entry 4.1).

- The increase in part-time enrollment in higher education from 1970 to 1980 was primarily due to the enrollment patterns of older students, whose numbers increased substantially. Anticipated growth in part-time enrollment is expected to offset declines in full-time enrollment and keep total enrollment in 1990 at a level almost as high as that projected for 1985 (entry 4.2).

- State funds were a substantial source of revenues for all public institutions, and Federal funds were more important to private universities than to any other type of institution. Students provided a larger share of the revenues for private than for public institutions (entry 4.12).

- Current funds expenditures of institutions of higher education rose between 1970 and 1980, even after controlling for inflation. Still, adjusted expenditures calculated per full-time-equivalent student at public institutions showed relatively small changes during the decade (entry 4.14).

- Nearly half of the parents of high school seniors thought that parents should have the main responsibility for the cost of their children's education beyond high school, although the proportion was smaller for low-income parents (entry 4.18).

- Amid changing economic conditions, college graduates were least likely to be unemployed. Highest unemployment rates were consistently found for those with less than a high school education (entry 5.23).

- Increased levels of education are having less of an impact on money income than in the past. The gap between salaries of high school graduates and college graduates has declined substantially over the past 12 years (entry 5.25).

The Condition of Education

1982 Edition

Statistical Report
National Center for Education Statistics

Edited by Nancy B. Dearman
and Valena White Plisko

U.S. Department of Education
T.H. Bell, Secretary

Office of Educational Research and Improvement
Donald J. Senese, Assistant Secretary

National Center for Education Statistics
Marie D. Eldridge, Administrator

National Center for Education Statistics

"The purpose of the Center shall be to collect and disseminate statistics and other data related to education in the United States and in other nations. The Center shall . . . collect, collate, and from time to time, report full and complete statistics on the conditions of education in the United States; conduct and publish reports on specialized analyses of the meaning and significance of such statistics; . . . and review and report on education activities in foreign countries."—Section 406 (b) of the General Education Provisions Act, as amended (20 U.S.C. 1211e-1).

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Foreword

The Condition of Education is the annual statistical report describing conditions in education as well as those in the larger society that affect education. It is prepared by the National Center for Education Statistics as required by Public Law 93-380, Title V, Section 501 (a). This is the eighth such report.

The statistical report profiles trends and developments in educational institutions, participants, and personnel at all levels of schooling. This year's edition focuses on the impact of enrollment change at both the elementary/secondary and postsecondary school levels. Chapter 1 establishes the context for examining enrollment change, and chapter 2 and chapter 4 describe the adjustments made by schools and institutions to shifting population needs. In addition, chapter 3 takes a special look at the public elementary/secondary teaching force, and chapter 5 concludes the report by presenting the most recent data on the outcomes of schooling from kindergarten through college.

The narrative for each chapter refers to data presented in chartbook form. Each entry on a topic consists of a table and a chart, which are presented together. The data highlighted in the chart, and briefly described in a statement accompanying the chart, are extracted from the facing table. Data used in the chart appear in boldface type in the table, which may be readily consulted for further information.

In this report, an effort was made to address a broad range of significant issues at all levels of education. Data on emerging as well as recurring issues are reported. Many of the statistics presented here relate to issues not included in previous editions of the report. To aid readers desiring statistics on other topics or more data on a particular issue, a cumulative index lists topics and data shown in the 1979, 1980, and 1981 editions, as well as in the present edition.

Part Two of this report contains a description of the activities of the Center for fiscal year 1982 and 1983 to help the reader understand the information and services available in the National Center for Education Statistics.

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The Condition of Education, 1982, Statistical Report, was prepared by the National Center for Education Statistics (NCES) in the Division of Statistical Services under the supervision of Nancy-Jane Stubbs, Assistant Administrator, and Forrest W. Harrison, Statistical Information Branch Chief.

Project Director Nancy B. Dearman and Associate Project Director Valena White Plisko were responsible for the development and preparation of the report. Richard Whalen assisted in researching data and was responsible for producing all computer graphics used for chart design. Thomas Litkowski and Maria Owings contributed materials and text and provided research and editing services. James DeGracie prepared the section on data sources.

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The Condition of Education

Chapter 1
An Overview

Major demographic shifts in the U.S. population have profoundly affected the Nation's educational institutions at all levels over the past 20 years. At the elementary/secondary level, an unprecedented baby-boom produced rapid expansion in the 1950's and 1960's, followed by a steady decline in enrollment in the succeeding decade. At the higher education level, the maturation of the baby-boom generation contributed to tremendous enrollment growth from the mid-1960's to the mid-1970's. As the 1980's unfold, various demographic forces will exert new pressures on the educational systems.

This first chapter surveys the changing demography of American society as it has affected education over the last 20 years and into the 1980's. Trends in the size and age composition of the population are examined for their impact on enrollment at each educational level. Other social developments, such as female labor force participation and delayed marriage, are also discussed as they have contributed to the changing education scene. Chapter 2 follows this theme by examining the adjustments made in resources and organization at the elementary/secondary level in response to the declining student population. Chapter 3 focuses further on the consequences of decreased demand for a major educational resource, teachers, in public elementary/secondary schools. Chapter 4 investigates developments affecting the financial viability and growth potential of educational institutions, both collegiate and vocational, at the postsecondary education level. Shifting the report's theme of the impact of population on education, Chapter 5 concludes the report by presenting the latest information on the impact of education on participants at each level of schooling.

Population size is perhaps the single most important factor contributing to enrollment change for each level of schooling. Mainly due to changes in birth rates following World War II, enrollment at all levels increased rapidly in the 1960's and subsequently declined or stabilized during the 1970's. Changes for the 1980's are expected to be in the opposite direction of the trends experienced in the 1970's (entry 1.1). The populations of preprimary and elementary school age children are projected to rise while the secondary school age group will continue to fall. Even with expansion of the younger student populations, these age groups are not expected to exceed the peak numbers of the 1960's. At the close of the 1980's, the elementary and secondary school age groups combined are projected to comprise 18 percent of the total population, down from 26 percent in 1970. The 18- to 21-year-old group is expected to drop by some 15 percent, followed closely by the downturn in the 22- and 24-year-old group. The 25-year-old and over age group is projected to represent some 63 percent of the total population, a record proportion.

Trends in Preprimary and Elementary/Secondary Education

At no level is the impact of birth cohorts more marked than at the elementary school level, where participation by the age group approaches 100 percent. From year to year, slight fluctuations in the population size are directly registered in shifting enrollment demands. According to demographic projections, elementary school age groups are expected to begin increasing in 1985 after a 15-year decline. These children, many as yet to be born, will be the products of the large generation of post-World War II baby-boom parents and as such are expected to create a small baby boom of their own. This large cohort is anticipated even without an increase in the birth rate because of the great numbers of women of child-bearing age who have delayed having children until their late twenties. The subsequent increase in the elementary school enrollment is expected to be rather rapid compared with the rate of decline since 1970 (entry 1.2). In fact, the population of elementary school age is projected to increase as much in the 10 years between 1985 and 1995 as it declined in the previous 15 years from 1970 to 1985.

This new wave of students is likely to appear in larger preprimary enrollments by the early 1980's. These numbers will be in addition to the continued growth in the rate of participation in nursery schools and kindergartens. Despite smaller numbers of 3- to 5-year-olds in the 1970's, preprimary enrollment remained fairly stable as a result of increased participation during this period (entry 1.3). In 1970, 20 percent of 3- and 4-year-olds and 69 percent of 5-year-olds were enrolled in nursery school or kindergartens. By comparison, 37 percent of 3- and 4-year-olds and 85 percent of 5-year-olds participated in 1980.

This growth was not restricted to any socioeconomic, racial/ethnic, or residency group but was widespread throughout the Nation. From 1965 to 1980, participation rates of 3- and 4-year-olds tripled in both central cities and suburbs of metropolitan areas (entry 1.4). In 1980, about 42 percent of 3- and 4-year-olds in metropolitan areas were enrolled. Although preprimary participation in nonmetropolitan areas was considerably lower, it increased by nearly four-fold over the 15-year period, to 26 percent of 3- and 4-year-olds.

One development associated with the rise in preprimary participation has been the increased labor force participation of women with young children. In 1966, about one-third of mothers of 3- to 5-year-olds were in the work force; by 1981, this proportion had reached 56 percent. Before 1976, the labor force participation rate for these mothers had been lower than that for all women; in 1981 it was 4 percentage points higher. The impact of this development is shown in the preprimary participation rates of 3- and 4-year-olds (entry 1.5). Those with employed mothers were more likely to be enrolled than children with mothers keeping house. Among 3-year-olds, 34 percent of those with mothers in the labor force participated compared to 21 percent with mothers keeping house. Among 4-year-olds, the rates were 52 percent compared to 40 percent. Because kindergarten has become so common among 5-year-olds, their mothers' labor force status no longer differentiates participation. For all children, those with mothers working full-time were the most likely to be enrolled in all-day programs.

While the population in the elementary grades will be increasing in the second half of the 1980's, its impact will not be felt in the secondary grades until about 7 years later. The situation will be similar to the conditions that existed in the early 1970's when enrollments declined at one level and grew at another. In the 1980's, however, it will be the elementary school level that will expand while the secondary school level continues to decline. As occurred in the 1970's, teachers, physical plants, and other school resources may not be transferred easily from one level to the next. Shortages may be experienced in elementary schools at the same time that teachers may be laid off and schools closed at the secondary level.

The rate at which schools retain students until graduation also influences the size of secondary school enrollment and, subsequently, the size of the higher education applicant pool. If high schools retained the 7 percent of students estimated to drop out from the sophomore year on, the gain in participation could partially offset the population decline at the secondary school level. According to data from the 1980 Current Population Survey, 9 percent of 16- and 17-year-olds and 16 percent of 18- and 19-year-olds were dropouts, persons not enrolled and not high school graduates. Although significant increases occurred in the proportion of the population who completed high school in previous decades, little change has been evident in the rate over the past 10 years. Secondary schools in the 1970's graduated about three-fourths of the relevant age group each year, down slightly from a high in 1969 (entry 1.6). Throughout the 1980's, this ratio is expected to remain at the same level.

Further evidence of a static high school completion rate is available from age comparisons of educational attainment. Data from the 1980 Current Population Survey show large differences in educational attainment from the oldest to the younger adult groups. Among persons 75 years old and older, only one-third had completed high school compared to 80 percent among the age group in their thirties (entry 1.7). However, the completion rate for the group in their mid- to late-twenties was not different from the rate for those in their thirties, indicating that over the last decade no new gains have been made in increasing high school completions.

Over the past decades, completion rates for blacks and Hispanics have increased significantly, although they still do not approximate those of whites. In 1980, among the population 25 years old and over, 51 percent of blacks and 45 percent of Hispanics had at least completed high school, compared to 70 percent of whites (entry 1.8). By contrast, in 1970, 36 percent of minorities compared to 57 percent of whites had high school educations. From the oldest group to the youngest group, the proportions completing high school increased seven-fold for blacks and five-fold for Hispanics. Yet, as in the general population, the increases for minorities slowed over the past 10 years, as evidenced by small differences in attainment between the younger adult cohorts. Among the age group in their mid- to late-twenties, rates for blacks and Hispanics remained 10 and 28 percentage points below those of their white counterparts. High school completion rates not only have significance in terms of the secondary schools' ability to retain students, but also in terms of determining the pool of eligibles from which higher education applicants are drawn. Chapter 3 will show that much of the variation in college participation rates among racial/ethnic groups can be explained by differential high school graduation rates.

Trends in Postsecondary Education

Compared to enrollment changes in elementary/secondary schools, changes in higher education enrollment are less the direct effects of population shifts. Although higher education has drawn its participants from a narrow age range in the past, participation is no longer limited to the 18- to 24-year-old population. Between 1968 and 1980, total college enrollments increased from 7.5 million to 12.1 million (entry 1.9). Though enrollments for young people of typical college age, 18 to 24 years old, have increased from 5.3 million in 1968 to 7.3 million in 1980, the greatest growth has been for enrollments of persons 30 years of age and over. The number of persons between 30 and 34 years old enrolled in college more than doubled from under half a million in 1968 to over 1.2 million in 1980. The number of enrollees over 35 years old has grown almost as much, from two-thirds of a million in 1972 to 1.4 million in 1980.

College enrollment is as dependent on the rate of participation as on population shifts. Since college enrollment is not compulsory, it engages only a portion of the eligible population. College entry usually requires a high school diploma as a minimum standard, meaning that not all students are eligible. Thus, monitoring developments in higher education enrollment requires examining not only the population pool but also recent trends in participation of the traditional college age population and of older adults.

Even among the traditional college age population, participation is not entirely predictable. The young adult population has various options following high school, college attendance being just one of them. Participation rates of the 18- to 24-year-old group have undergone substantial changes over the past 20 years, increasing from 19 percent to 28 percent of the total population in this age group (entry 1.10). This increase can be partially attributed to a greater proportion of males enrolled during the Vietnam War era and into the 1970's. Of even greater significance to the rise in the participation rate among the 18- to 24-year-olds was the substantial increase in the enrollment of young women. In 1960, 14 percent of the female population 18 to 24 years old was enrolled in college; by the late 1970's, this proportion had doubled. By 1980, college participation of young women was no different than that of their male counterparts; about 28 percent were enrolled. If these trends continue, rates among females of this age group will soon surpass those among males. The increased participation of women of all ages already accounts for a female majority on college compuses.

This growth in college participation among young women has paralleled a rise in female participation in the labor force. From 1960 to 1980, young women moved into the labor market and into the college classroom in unprecedented numbers and, in many cases, combined both work and college attendance. The proportion of young females who were enrolled and also in the labor force rose from under 5 percent to almost 15 percent over the 20-year period. The proportion not in school and not in the labor market fell from 43 percent to 19 percent.

Labor force participation of young men also increased, while the proportion of those entering the Armed Forces declined. Young men, in proportions equal to those of young women, combined schooling and work; almost 15 percent were enrolled and also in the labor force in 1980. However, in 1980 the proportion of males enrolled in college but not participating in the labor force was slightly lower than the percentage in 1960, though the proportion did increase in the late 1960's.

Young adults were much less likely to combine college with marriage. Only 2 percent of all males and females who were 18 to 24 years old in 1980 chose this option, continuing a relatively unchanged pattern (entry 1.11). The proportion of young men who were both single and in college also has remained fairly constant, at about 23 percent since 1966. The proportion of young women who were both single and enrolled in college doubled over the same period and, in 1980, equaled that of their male counterparts. This rise in educational participation of young women accompanied a substantial increase in single status among female young adults. This is not to imply any causal relationship between marital status and college enrollment or the direction of cause and effect. The data do make clear, however, that the increased proportion of single young women enlarged the pool of young adults who traditionally have been most likely to attend college.

Most young persons who enter college do so directly out of high school, though some postpone entry for one or more years. Of the 1972 high school senior class, 42 percent entered college in the first year following graduation (entry 1.12). These students comprised 76 percent of all who entered college by the age of 25. After the initial year, the proportion to enroll for the first time dropped sharply but did not disappear. In the second year out of high school, another 4 percent enrolled for the first time, representing about 7 percent of all who attended college at one time or another. Even after the students had been out of high school for 4 years, an additional 1 percent entered college each year. These late entrants represented small but significant increments in the total number of college students. Late entry and reentry, along with graduate attendance, meant that some 11 percent of the high school senior class was enrolled in college as late as 7 years beyond high school.

Vocational school is also an option for young adults. Of the one-fourth of the 1972 senior class who entered vocational school, about 41 percent entered in the first year after graduation. First-time enrollment in vocational school dropped off gradually so that, from 5 to 7 years out of high school, about 1 percent of new entrants from the 1972 class enrolled annually. Again, although their proportions were small, delayed entrants comprised additional enrollment beyond those recent high school graduates upon whom postsecondary schools have counted. It is also noteworthy that, after the first year, about the same proportion of students chose to enter vocational schools as entered college for the first time. While vocational training was not as frequent a choice among high school seniors, for those who waited at least a year to enter postsecondary schools, a vocational school was as likely a choice as college.

The postsecondary plans of high school seniors suggest some potential trends in the further schooling of the college age population. Longitudinal data show that educational plans of high school students set an upper limit to future participation and thus offer a high estimate of later attainment. In most cases, their realization of these plans approaches or falls just short of the initial intention. This is not always the fact, however, as in the case of young women whose later educational attainment exceeded their original expectations. Data from the Current Population Survey show that during the 1970's, postsecondary plans of high school seniors were fairly high at the beginning of the decade, fell slightly for a few years, and then rose to their highest point by the end of the decade (entry 1.13). In 1979, over half of the high school seniors indicated that they planned to enter college, and another one-fourth responded that they might enter. Over the decade, the proportion with some vocational school plans remained about 10 percent. Only about 16 percent of the seniors had no plans for college or vocational school in 1979. The percentages of males and females with college plans were about equal in the first half of the 1970's, but by the close of the decade, the proportion of women with college plans exceeded that of their male classmates.

Differences persisted among subgroups in the population, suggesting no new trends for increased participation among groups with traditionally lower rates. The proportion of blacks with college plans generally was somewhat lower than that of whites. Large differences were evident among students by the educational attainment of their household head. Slightly over one-third of those seniors from families with the lowest educational attainment intended to go on to college, compared with some 82 percent of their classmates from the most educated families. The control of the high school also differentiated the postsecondary plans of the seniors; 49 percent of public school seniors had college plans compared to 74 percent of private school seniors.

Young people still comprise the majority of total college enrollment, but they now represent a smaller proportion of that total than they did nearly 10 years ago. Fifty-three percent of all college students in 1972 were ages 18 to 21 and 14 percent were 30 or older. By 1980, the data show a decline to 47 percent for the younger age group, but an increase to 20 percent for the older group.

Participation by adults in part-time instruction increased substantially during the past decade, a trend that is expected to continue through the 1980's and into the 1990's. This adult education instruction, which encompassed nonacademic as well as degree credit courses, engaged a growing proportion of the adult population, 13 percent of all adults in 1981. Since 1969, when approximately 13 million persons participated in adult education, participation has increased by over 61 percent to a total of more than 21 million adults in 1981, an annual rate of growth of 4 percent. While specific figures for 1969 cannot be directly compared due to changes in the definition of adult education, it is safe to say that participation in adult education activities has maintained a steady rate of growth for the past 12 years. From 1978 to 1981, participation grew by over 3 million, or almost 17 percent (entry 1.14). A portion of this increase was due simply to increases in the adult population; in 1978, 72 percent of the population was over 17 years old compared to 74 percent in 1981. However, even accounting for the effects of population growth, the rate of participation increased by 8 percent.

The increased participation of older students registers in the additional years of schooling completed by adults over time. Trend data from the Current Population Survey indicate that a significant proportion of adults have returned to school and have continued their college education into their forties. Between 1965 and 1980, as adult cohorts aged, the proportion with some college experience increased at each 5-year interval (entry 1.15). Among the older adult group, those in their early forties in 1980, an additional 9 percent of males and 8 percent of females received at least a complete year of college over the 15-year period. This means that approximately one-fourth of both the men and women in this group gained additional college training beyond the age of 29. The younger adult cohort, those in their late thirties in 1980, showed similar increases. Among both males and females in this age group, an additional 10 percent had completed some college by 1980.

This chapter has shown the impact of population size and associated social developments on enrollment change. Enrollment trends anticipated for the 1980's will be moving in the opposite direction of trends experienced in the previous decade. Preprimary and elementary school enrollment are expected to expand as a new large wave of children reaches school age, while secondary school enrollment continues to contract. At the higher education level, the decline in the traditional college age population may be offset partly by the continued growth in the participation of young women and delayed entrants and the increased enrollment of older adults. Later chapters will survey the adjustments made by the Nation's education systems and institutions to respond to these changing enrollment demands.

Table 1.1

Estimated and Projected Population[1], by Age Group: July 1960 to July 1989

July of Year	Total Population[2]	3 and 4 Years Old	5 to 13 Years Old	14 to 17 Years Old	18 to 21 Years Old	22 to 24 Years Old	25 Years Old and Over
				In Thousands			
1960	180,671	**8,063**	**32,965**	**11,219**	**9,555**	6,573	100,017
1961	183,691	**8,207**	**33,217**	**12,052**	**10,290**	6,715	100,895
1962	186,538	**8,190**	**33,897**	**12,759**	**10,814**	6,874	101,724
1963	189,242	**8,152**	**34,578**	**13,500**	**11,171**	7,098	102,553
1964	191,889	**8,206**	**35,244**	**14,274**	**11,346**	7,437	103,423
1965	194,303	**8,190**	**35,754**	**14,153**	**12,204**	8,089	104,280
1966	196,560	**8,031**	**36,283**	**14,405**	**12,943**	8,433	105,290
1967	198,712	**7,888**	**36,629**	**14,735**	**13,738**	8,589	106,458
1968	200,706	**7,645**	**36,804**	**15,173**	**14,529**	8,355	107,933
1969	202,677	**7,253**	**36,836**	**15,560**	**14,426**	9,297	109,181
1970	204,878	**6,954**	**36,663**	**15,910**	**14,707**	9,980	110,498
1971	207,053	**6,777**	**36,105**	**16,281**	**15,019**	10,759	111,712
1972	208,846	**6,740**	**35,458**	**16,557**	**15,437**	10,476	113,938
1973	210,410	**6,867**	**34,737**	**16,748**	**15,795**	10,602	115,835
1974	211,901	**7,023**	**34,072**	**16,880**	**16,110**	10,807	117,745
1975	213,559	**6,799**	**33,440**	**16,934**	**16,484**	11,120	119,701
1976	215,152	**6,313**	**32,962**	**16,893**	**16,767**	11,396	121,790
1977	216,880	**6,054**	**32,228**	**16,784**	**16,957**	11,648	124,014
1978	218,717	**6,052**	**31,397**	**16,651**	**17,101**	11,871	126,321
1979	220,584	**6,074**	**30,647**	**16,276**	**17,148**	12,136	128,728
				Projected[3]			
1980	222,159	**6,108**	**30,197**	**15,763**	**17,117**	12,346	130,716
1981	224,212	**6,264**	**29,804**	**15,219**	**17,018**	12,494	133,056
1982	226,341	**6,490**	**29,543**	**14,656**	**16,874**	12,483	135,522
1983	228,508	**6,780**	**29,334**	**14,309**	**16,499**	12,524	137,969
1984	230,692	**7,092**	**29,175**	**14,261**	**15,989**	12,491	140,375
1985	232,880	**7,349**	**29,098**	**14,392**	**15,442**	12,411	142,734
1986	235,061	**7,517**	**29,475**	**14,295**	**14,873**	12,212	145,132
1987	237,226	**7,628**	**30,142**	**13,965**	**14,521**	11,925	147,418
1988	239,364	**7,708**	**30,945**	**13,480**	**14,470**	11,497	149,602
1989	241,463	**7,764**	**31,715**	**12,996**	**14,601**	11,028	151,694

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[1] Total population including Armed Forces overseas.

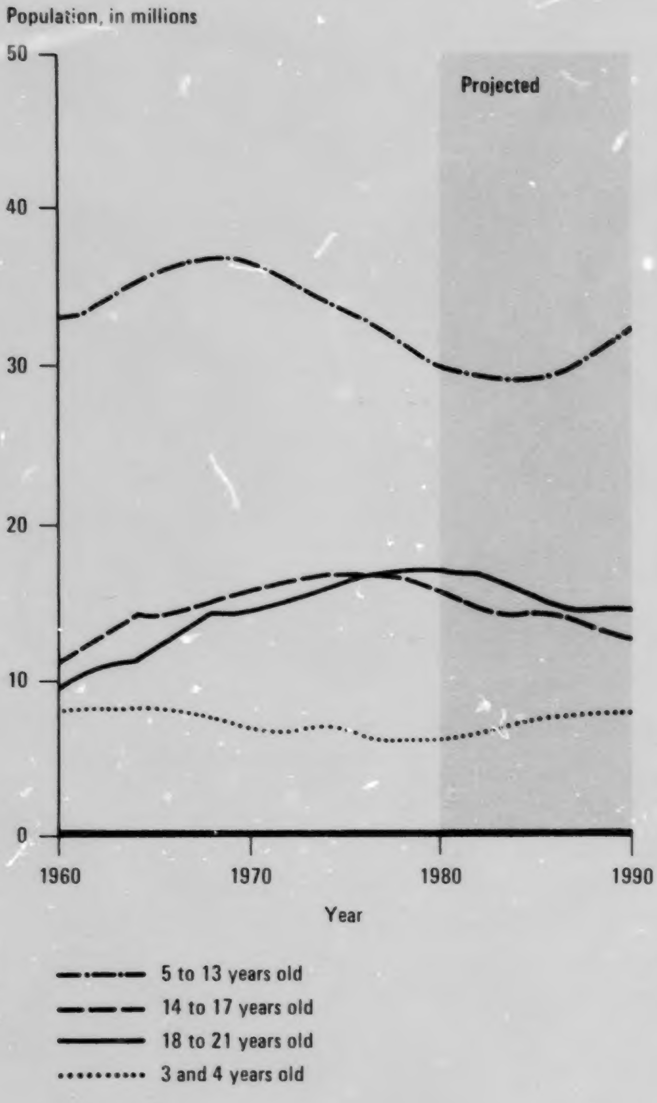
[2] Includes population under 3 years old.

[3] Series II projections.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-25, No. 519, 1960-73, No. 721, 1970-77, No. 870, 1976-79, No. 704, 1977-2050.

Chart 1.1

Population of School Age Groups



Peak years for population groups were 1961 for 3- and 4-year-olds, 1969 for 5- to 13-year-olds, 1975 for 14- to 17-year-olds, and 1980 for 18- to 21-year-olds.

Table 1.2

Enrollment in Educational Institutions, by Level of Schooling: Fall 1960 to Fall 1990

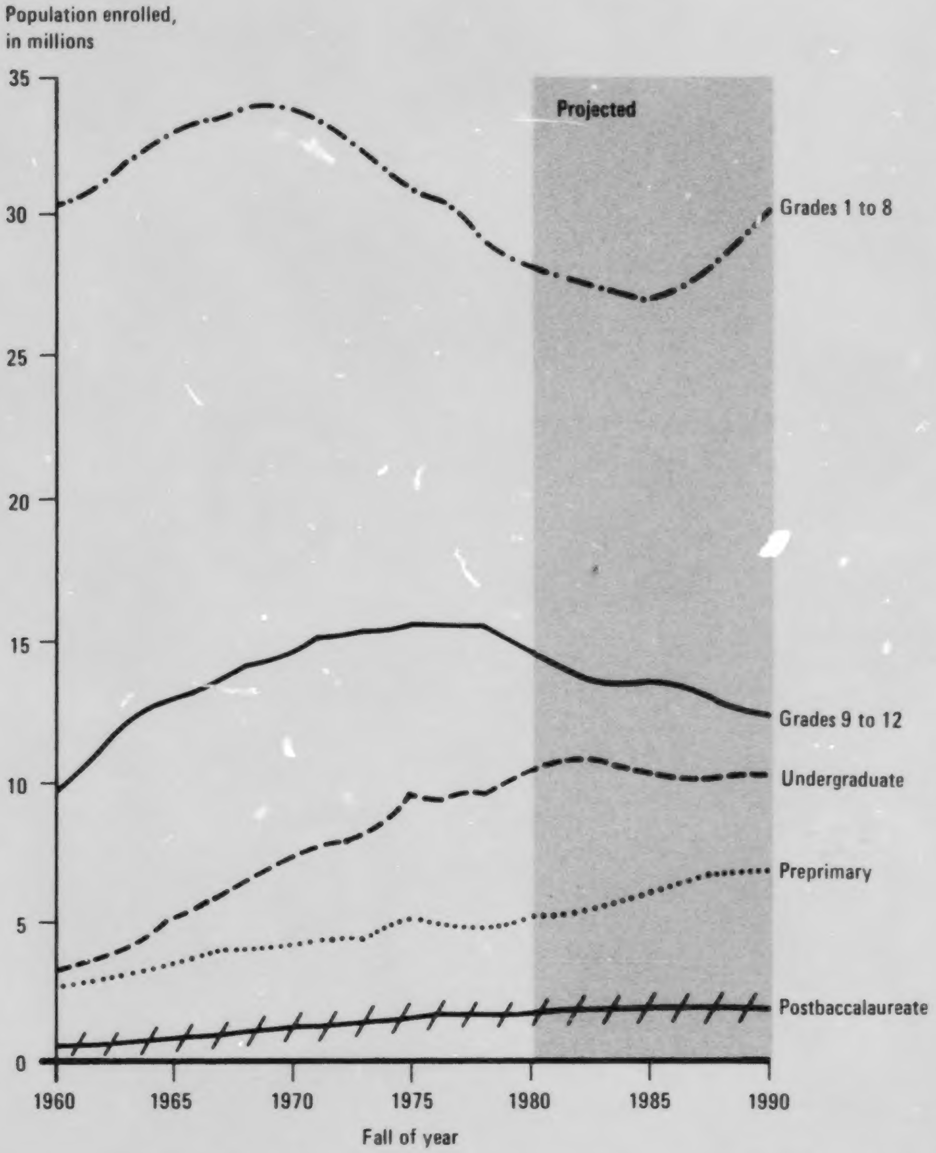
Fall of Year	Total	Pre-primary	Grades 1 to 8	Grades 9 to 12	Higher Education		
					Total	Under-graduate	Post-baccalaureate
				Number, in Thousands			
1960	46,574	[1]2,736	30,360	9,689	3,789	[1]3,276	[1]513
1961	48,091	[1]2,879	30,696	10,469	4,047	[1]3,499	[1]548
1962	49,997	[1]3,030	31,251	11,312	4,404	[1]3,808	[1]596
1963	52,082	3,168	31,965	12,183	4,766	[1]4,121	[1]645
1964	53,876	3,301	32,604	12,691	5,280	[1]4,565	[1]715
1965	55,498	3,577	32,990	13,010	5,921	[1]5,120	[1]801
1966	56,861	3,803	33,374	13,294	6,390	[1]5,525	[1]865
1967	58,181	4,026	33,593	13,650	6,912	6,016	897
1968	59,621	4,084	33,906	14,118	7,513	6,476	1,037
1969	60,478	4,136	34,015	14,322	8,005	6,886	1,111
1970	61,380	4,279	33,877	14,643	8,581	7,376	1,206
1971	61,863	4,330	33,468	15,116	8,949	7,743	1,206
1972	61,650	4,417	32,085	15,213	9,215	7,941	1,273
1973	61,531	4,399	32,153	15,377	9,602	8,261	1,341
1974	62,014	4,858	31,500	15,432	10,224	8,798	1,426
1975	62,813	5,141	30,883	15,604	11,185	9,679	1,507
1976	62,226	4,996	30,565	15,653	11,012	9,429	1,584
1977	61,665	4,806	29,990	15,583	11,286	9,715	1,570
1978	60,673	4,813	29,025	15,576	11,259	9,691	1,569
1979	60,106	4,895	28,547	15,094	11,570	9,998	1,572
1980	60,176	5,162	28,247	14,670	12,097	10,476	1,621
				Projected			
1981	59,747	5,205	27,867	14,233	12,442	10,734	1,708
1982	59,388	5,372	27,613	13,783	12,620	10,882	1,738
1983	59,022	5,584	27,383	13,542	12,513	10,754	1,759
1984	58,877	5,859	27,133	13,534	12,351	10,570	1,781
1985	58,931	6,127	27,015	13,615	12,174	10,382	1,792
1986	59,365	6,379	27,369	13,497	12,120	10,317	1,803
1987	59,883	6,585	27,988	13,217	12,093	10,293	1,800
1988	60,275	6,683	28,658	12,836	12,098	10,296	1,802
1989	60,907	6,772	29,438	12,558	12,139	10,362	1,777
1990	61,699	6,877	30,298	12,423	12,101	10,334	1,767

[1] Estimated.

Source: U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics to 1986-87, Projections of Education Statistics to 1988-1989,* and *Projections of Education Statistics to 1990-91,* forthcoming and unpublished tabulations.

Chart 1.2

Enrollment, by Level



The enrollment upswing projected for the preprimary level is expected to reach the elementary grades after 1985 but not the secondary grades until into the 1990's. Undergraduate enrollment is expected to drop slightly while postbaccalaureate enrollment remains unchanged.

Table 1.3

Preprimary School Enrollment of 3- to 5-Year-Olds, by Age: October 1968 to October 1980

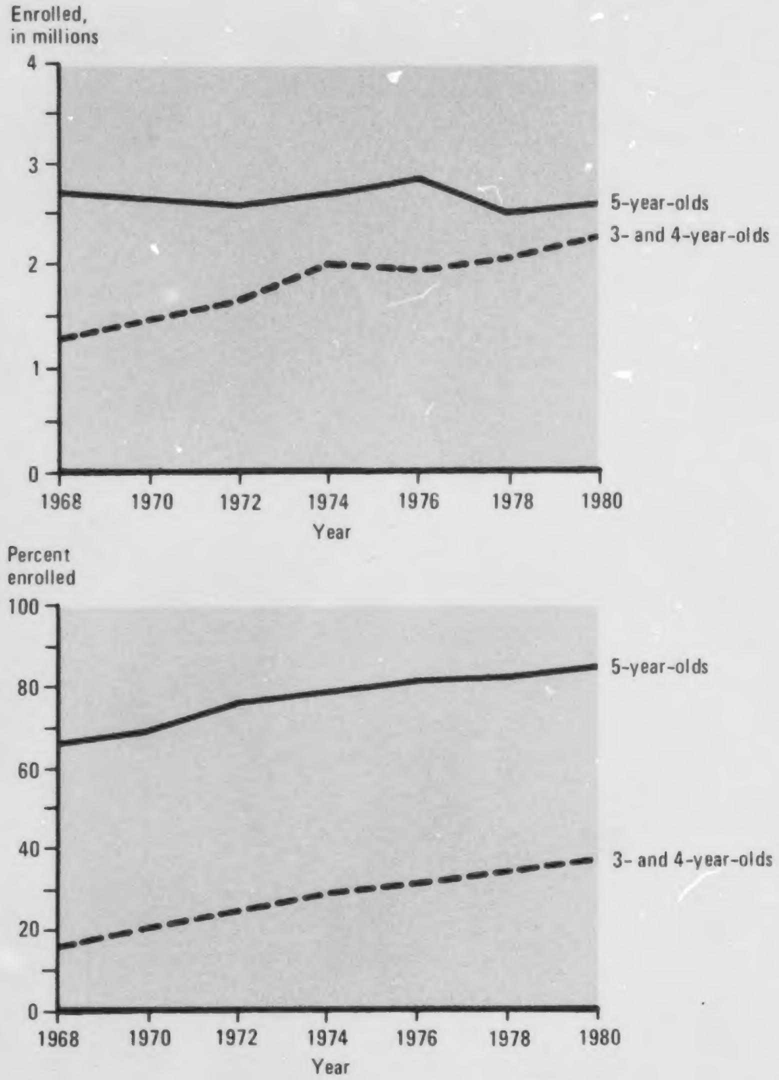
Year	Population	Total Enrolled	Percent Enrolled
	Numbers, in Thousands		
Total			
1968	11,905	3,928	33.0
1970	10,949	4,104	37.5
1972	10,166	4,231	41.6
1974	10,393	4,699	45.2
1976	9,726	4,790	49.2
1978	9,112	4,583	50.3
1980	9,284	4,878	52.5
3- and 4-year-olds			
1968	7,811	1,228	15.7
1970	7,136	1,461	20.5
1972	6,782	1,656	24.4
1974	6,966	2,007	28.8
1976	6,238	1,951	31.3
1978	6,052	2,072	34.2
1980	6,215	2,280	36.7
5-year-olds			
1968	4,095	2,702	66.0
1970	3,814	2,643	69.3
1972	3,384	2,575	76.1
1974	3,426	2,693	78.6
1976	3,488	2,839	81.4
1978	3,060	2,511	82.1
1980	3,069	2,598	84.7

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Education, National Center for Education Statistics, *Preprimary Enrollment October 1980,* forthcoming.

Chart 1.3

Enrollment in Preprimary Programs, by Age



While the number of 3- to 5-year olds enrolled in preprimary programs remained fairly stable throughout the seventies, the participation rates continued to climb.

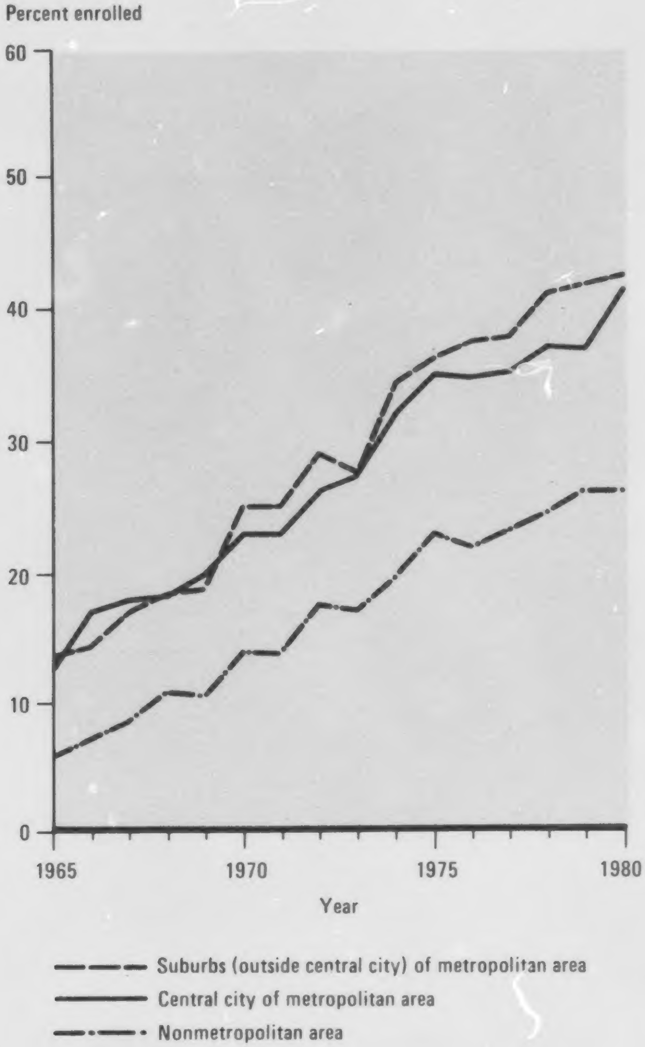
Table 1.4

Percent of 3- and 4-Year-Olds Enrolled in Preprimary Programs, by Metropolitan Residence: October 1965 to October 1980

October of Year	Population, 3 and 4 Years Old, in Thousands	Total	In Metropolitan Areas		In Nonmetropolitan Areas
			Central City	Outside Central City (Suburban)	
			Percent Enrolled		
1965	8,387	10.6	**12.5**	**13.7**	**5.8**
1966	8,242	12.5	**17.1**	**14.4**	**7.2**
1967	8,080	14.2	**18.1**	**17.1**	**8.5**
1968	7,811	15.7	**18.3**	**18.5**	**10.9**
1969	7,423	16.1	**19.8**	**18.9**	**10.5**
1970	7,136	20.5	**23.0**	**25.1**	**13.9**
1971	7,135	20.5	**23.0**	**25.1**	**13.8**
1972	6,782	24.4	**26.1**	**28.9**	**17.5**
1973	7,000	24.2	**27.2**	**27.6**	**17.1**
1974	6,966	28.8	**31.9**	**34.3**	**19.7**
1975	6,676	31.5	**34.9**	**36.2**	**22.9**
1976	6,239	31.3	**34.6**	**37.5**	**21.8**
1977	6,041	32.0	**35.1**	**37.9**	**23.1**
1978	6,052	34.2	**37.1**	**41.1**	**24.5**
1979	6,094	35.1	**36.9**	**41.9**	**26.2**
1980	6,215	36.7	**41.5**	**42.5**	**26.2**

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Preprimary Enrollment*, selected years and U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-20, selected years.

Percent of 3- and 4-Year-Olds Enrolled in Preprimary Programs, by Residence



Metropolitan central cities and suburbs exhibited appreciably greater preprimary participation than did nonmetropolitan areas. Increases in the percent enrolled have continued since 1965.

Table 1.5

Preprimary School Enrollment of 3- to 5-Year-Olds, by Age and by Labor Force Status of Mother: October 1980

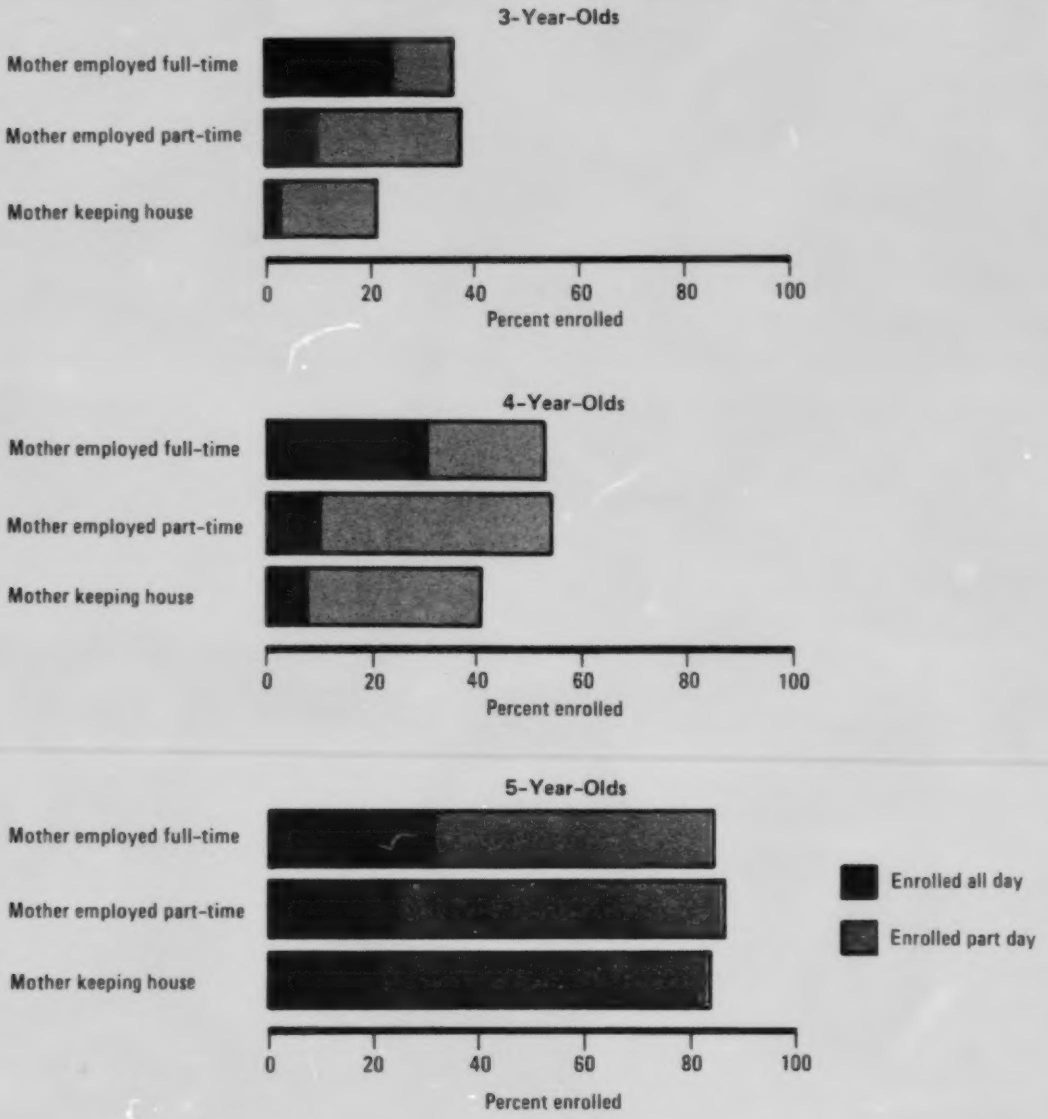
Labor Force Status of Mother	Total		3-Year-Olds		4-Year-Olds		5-Year-Olds	
	Enrolled	Enrolled All Day	Enrolled	Enrolled All Day	Enrolled	Enrolled All Day	Enrolled	Enrolled All Day
				Number, in Thousands				
All children	4,878	1,551	857	321	1,423	467	2,598	763
With mother in								
labor force	2,480	1,002	497	260	755	332	1,229	413
Employed full-time .	1,445	713	292	198	457	260	696	255
Employed part-time .	811	196	163	42	245	44	402	111
Unemployed	225	94	41	20	53	28	131	46
With mother not in								
labor force	2,266	491	339	50	628	117	1,299	325
Keeping house	2,105	439	309	37	582	102	1,214	300
In school	77	36	15	10	23	12	39	16
Other	85	15	15	3	23	3	47	9
No mother present . . .	131	57	21	13	39	19	70	26
				Enrolled as Percent of Age Group				
All children	52.2	16.7	27.3	10.2	46.3	15.2	84.7	24.9
With mother in								
labor force	57.1	23.1	34.4	18.0	51.9	22.8	85.2	28.6
Employed full-time .	57.4	23.3	35.4	24.0	52.5	29.9	84.6	31.0
Employed part-time .	59.6	14.4	37.2	9.6	53.7	9.6	86.5	23.9
Unemployed	48.5	20.3	22.8	11.1	41.1	21.7	85.1	29.9
With mother not in								
labor force	48.9	10.6	21.5	3.2	41.5	7.7	84.5	21.1
Keeping house	48.5	10.1	20.9	2.5	40.2	7.2	83.9	20.7
In school	63.0	29.5	37.2	**	56.1	**	95.1	**
Other	51.1	9.0	26.4	**	38.3	**	95.9	**
No mother present . . .	42.2	12.5	17.8	10.8	38.6	18.8	77.8	28.9

**Base too small for presentation of percents.

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Education, National Center for Education Statistics, *Preprimary Enrollment October 1980,* forthcoming.

Participation in Preprimary Programs, by Labor Force Status of Mother



Among 3- and 4-year olds, those with employed mothers were the most likely to be enrolled in preprimary programs while among 5-year-olds, differences in participation were only slight by labor force status of mother. Children of mothers working full-time had the highest participation rates in all-day programs.

Table 1.6

High School Graduates, by Sex and Control of School and GED[1] Recipients: School Year 1959-60 to 1989-90

School Year Ending	Total High School Graduates (excludes GED Recipients)	As Percent of Average of 17- and 18-Year-Old Population	Sex		Control		GED Recipients
			Male	Female	Public	Private (Estimated)	
			Numbers, in Thousands				
1960	1,864	67.1	898	966	1,633	231	–
1961	1,971	68.5	958	1,013	1,732	239	–
1962	1,925	70.7	941	984	1,685	240	–
1963	1,950	70.7	959	991	1,717	233	–
1964	2,290	70.2	1,123	1,167	2,015	275	–
1965	2,665	73.0	1,314	1,351	2,366	298	–
1966	2,632	74.7	1,308	1,325	2,334	298	–
1967	2,679	76.0	1,332	1,348	2,381	298	–
1968	2,702	75.3	1,341	1,360	2,402	300	–
1969	2,829	76.3	1,402	1,427	2,259	300	–
1970	2,896	76.0	1,433	1,463	2,596	300	–
1971	2,944	75.3	1,457	1,487	2,644	300	–
1972	3,008	75.4	1,490	1,513	2,706	302	238
1973	3,043	75.1	1,503	1,540	2,737	306	248
1974	3,080	74.2	1,515	1,565	2,771	310	272
1975	3,140	74.2	1,545	1,595	2,830	310	317
1976	3,155	74.6	1,554	1,601	2,844	311	335
1977	3,161	74.9	1,550	1,611	2,846	315	333
1978	[2]3,134	[2]73.8	1,534	1,600	2,832	302	357
1979	3,124	73.8	1,526	1,598	2,824	300	403
1980	3,063	73.6	1,502	1,561	2,764	299	453
			Projected				
1981	3,021	73.7	1,480	1,541	2,721	300	490
1982	2,937	73.6	1,438	1,499	2,637	300	490
1983	2,795	73.6	1,368	1,427	2,495	300	500
1984	2,680	73.6	1,312	1,368	2,380	300	500
1985	2,614	73.6	1,280	1,334	2,314	300	510
1986	2,599	73.6	1,273	1,326	2,299	300	530
1987	2,648	73.6	1,297	1,351	2,348	300	550
1988	2,710	73.6	1,330	1,380	2,410	300	560
1989	2,626	73.6	1,289	1,337	2,326	300	560
1990	2,444	73.6	1,199	1,245	2,144	300	560

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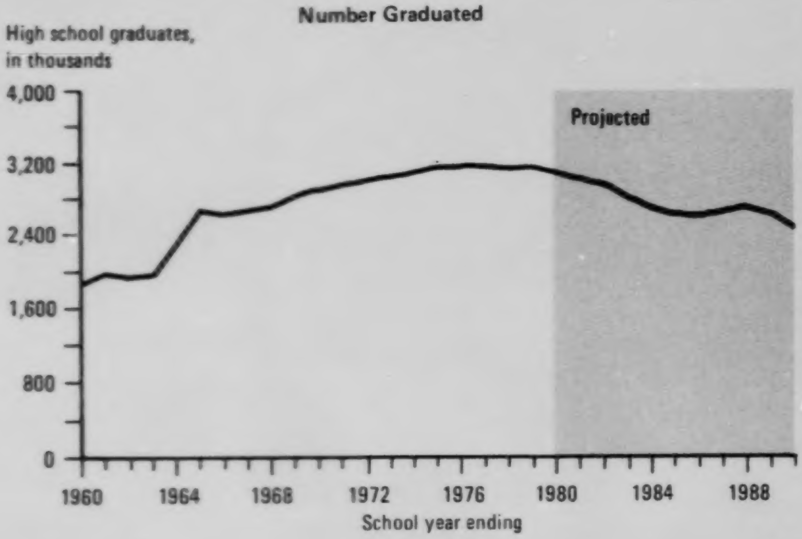
[1] Persons who received high school equivalency credentials through the General Educational Development (GED) testing programs. Their numbers have been adjusted to reflect school year.

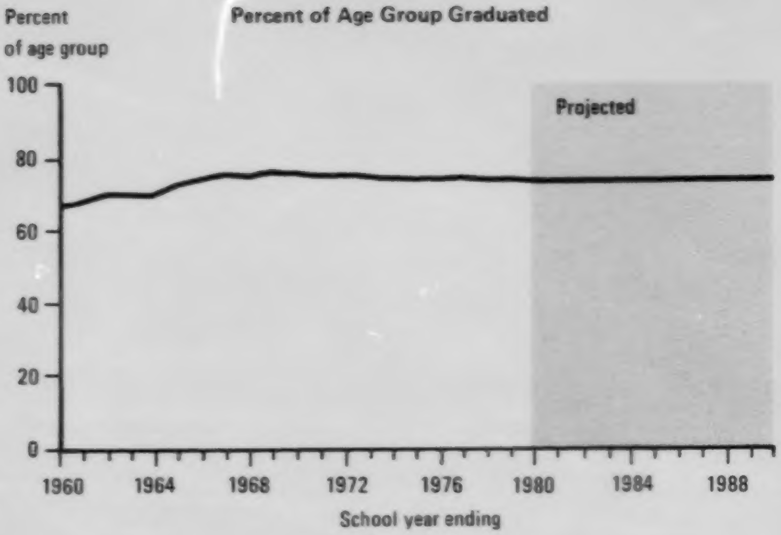
[2] Revised.

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics to 1986-87, Projections of Education Statistics to 1988-89,* and *Projections of Education Statistics to 1990-91,* forthcoming.

High School Graduates





Secondary schools graduated about 74 percent of the relevant age group, a proportion that has remained unchanged since the mid-1960's and is expected to be stable throughout the 1980's.

Table 1.7

Educational Attainment of Population[1] 25 Years Old and Over, by Sex and Age Group: March 1980

Age	Population, in Thousands	Percent High School Graduates[2]	Percent Completed 1 Year or More of College	Percent Completed 4 Years or More of College
Both sexes:				
25 years old and over	127,882	68.6	31.8	17.0
25 to 29 years old	18,433	85.6	44.7	22.5
30 to 34 years old	16,831	85.5	47.1	26.0
35 to 39 years old	13,803	80.2	39.5	22.1
40 to 44 years old	11,536	75.7	33.7	19.0
45 to 49 years old	11,025	70.7	28.8	16.5
50 to 54 years old	11,607	65.9	27.2	14.8
55 to 59 years old	11,274	64.1	24.7	12.5
60 to 64 years old	9,630	56.6	21.2	10.2
65 to 69 years old	8,573	46.3	17.2	9.0
70 to 74 years old	6,526	42.3	17.9	9.1
75 years old and over	8,644	33.7	15.1	7.5
Male:				
25 years old and over	60,257	69.1	36.4	20.8
25 to 29 years old	9,076	85.6	47.7	24.1
30 to 34 years old	8,270	86.8	54.0	31.4
35 to 39 years old	6,718	80.5	44.3	26.5
40 to 44 years old	5,579	76.5	39.1	23.4
45 to 49 years old	5,364	70.0	33.7	21.7
50 to 54 years old	5,598	63.8	31.8	19.2
55 to 59 years old	5,369	62.4	29.0	16.7
60 to 64 years old	4,501	56.3	24.2	12.2
65 to 69 years old	3,814	44.3	18.9	10.6
70 to 74 years old	2,735	39.6	18.5	10.6
75 years old and over	3,234	32.5	15.6	9.5
Female:				
25 years old and over	67,624	68.1	27.7	13.5
25 to 29 years old	9,357	85.6	41.8	20.9
30 to 34 years old	8,561	84.1	40.5	20.7
35 to 39 years old	7,085	79.9	34.9	17.9
40 to 44 years old	5,957	75.0	28.7	14.8
45 to 49 years old	5,661	71.4	24.2	11.5
50 to 54 years old	6,009	67.9	23.0	10.6
55 to 59 years old	5,905	65.6	20.8	8.7
60 to 64 years old	5,129	57.0	18.5	8.4
65 to 69 years old	4,759	48.0	15.8	7.8
70 to 74 years old	3,790	44.2	17.5	8.1
75 years old and over	5,411	34.4	14.8	6.3

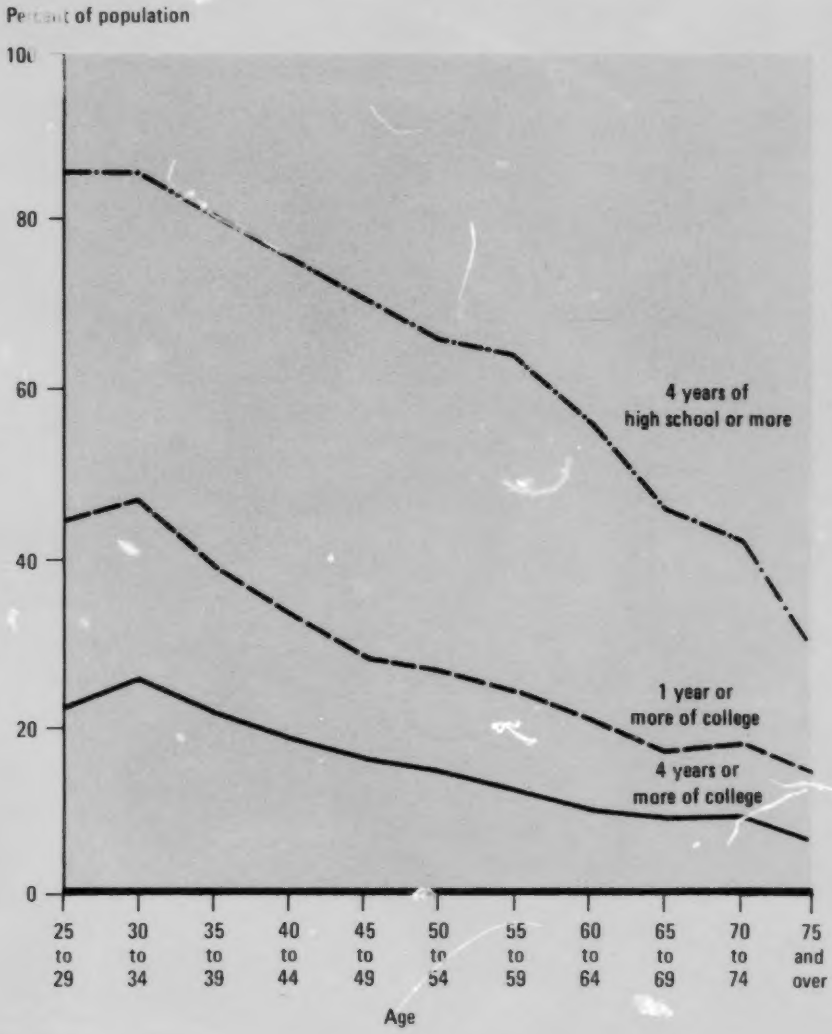
[1] Civilian population, including Armed Forces living off post or with their families on post.

[2] Completed 4 years of high school or more.

Source: U.S. Department of Commerce, Bureau of the Census, March 1980 Current Population Survey, unpublished tabulations.

Chart 1.7

High School and College Completion Rates, by Age Group



More than two-thirds of the adult population had completed high school by 1980, while 17 percent had completed college. Educational attainment generally decreased with increased age.

Table 1.8

Educational Attainment of Racial/Ethnic Groups, by Age Group: March 1980

Age	Population, in Thousands	Percent High School Graduates[1]	Percent College Graduates[2]
White:			
25 years old and over	112,899	70.5	17.8
25 to 29 years old	15,914	87.0	23.7
30 to 34 years old	14,644	86.7	27.1
35 to 39 years old	12,084	81.8	23.4
40 to 44 years old	10,076	77.9	20.3
45 to 49 years old	9,639	73.7	17.3
50 to 54 years old	10,280	69.0	15.4
55 to 59 years old	10,122	67.2	13.3
60 to 64 years old	8,695	59.6	11.0
65 to 69 years old	7,651	48.9	9.6
70 to 74 years old	5,922	44.3	9.6
75 years old and over	7,873	35.8	8.0
Black:			
25 years old and over	12,613	51.2	7.9
25 to 29 years old	2,079	76.9	11.7
30 to 34 years old	1,753	74.4	13.7
35 to 39 years old	1,444	67.1	10.1
40 to 44 years old	1,229	58.9	5.9
45 to 49 years old	1,147	46.2	7.6
50 to 54 years old	1,122	38.1	6.9
55 to 59 years old	993	34.0	4.6
60 to 64 years old	828	26.1	2.6
65 to 69 years old	823	22.0	4.1
70 to 74 years old	538	20.4	3.6
75 years old and over	658	10.0	1.6
Hispanic[3]:			
25 years old and over	5,896	45.3	7.9
25 to 29 years old	1,185	58.6	7.8
30 to 34 years old	1,001	55.3	10.6
35 to 39 years old	750	50.3	9.6
40 to 44 years old	721	48.3	8.5
45 to 49 years old	547	42.2	8.8
50 to 54 years old	499	35.7	6.2
55 to 59 years old	372	27.5	4.3
60 to 64 years old	259	31.7	5.7
65 to 69 years old	240	26.0	7.6
70 to 74 years old	143	14.0	2.5
75 years old and over	180	10.6	2.5

[1] Completed 4 years of high school or more.

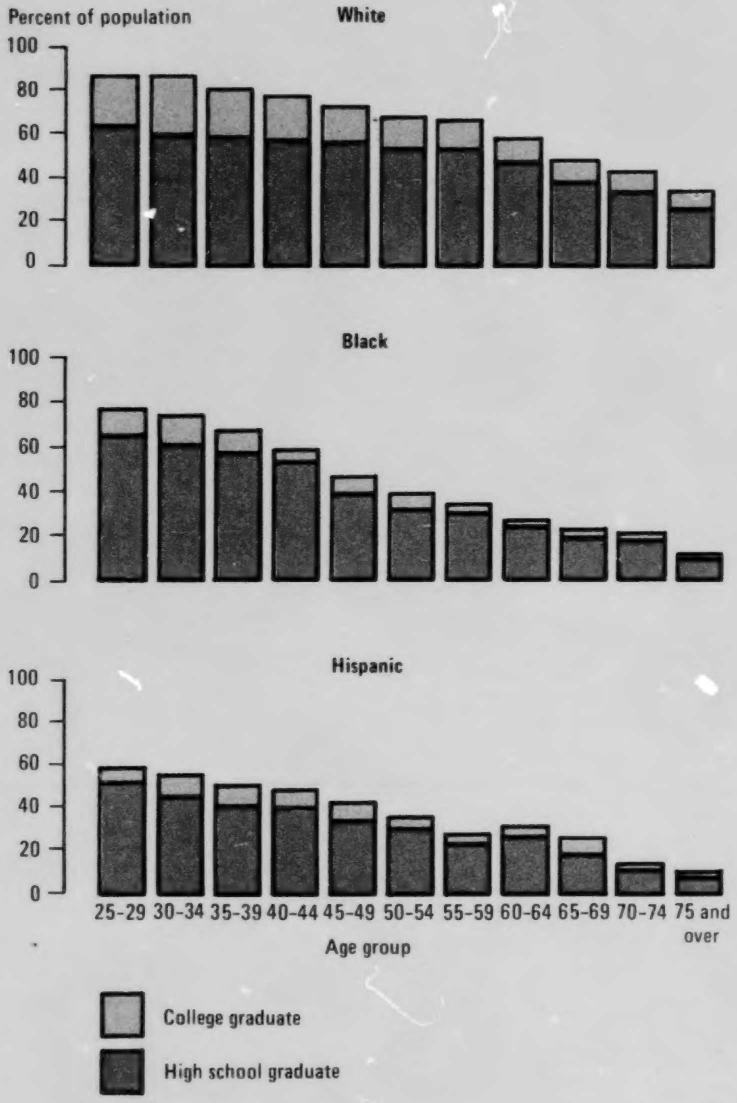
[2] Completed 4 years or more of college.

[3] Persons of Hispanic origin may be of any race and may be included in the white and black counts.

NOTE: Civilian population, including Armed Forces living off post or with their families on post.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March 1980 Current Population Survey, unpublished tabulations.

Educational Attainment, by Racial/Ethnic and Age Group



Blacks and Hispanics were only half as likely as whites to have completed college, although younger minority members have narrowed the gap somewhat.

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Table 1.9

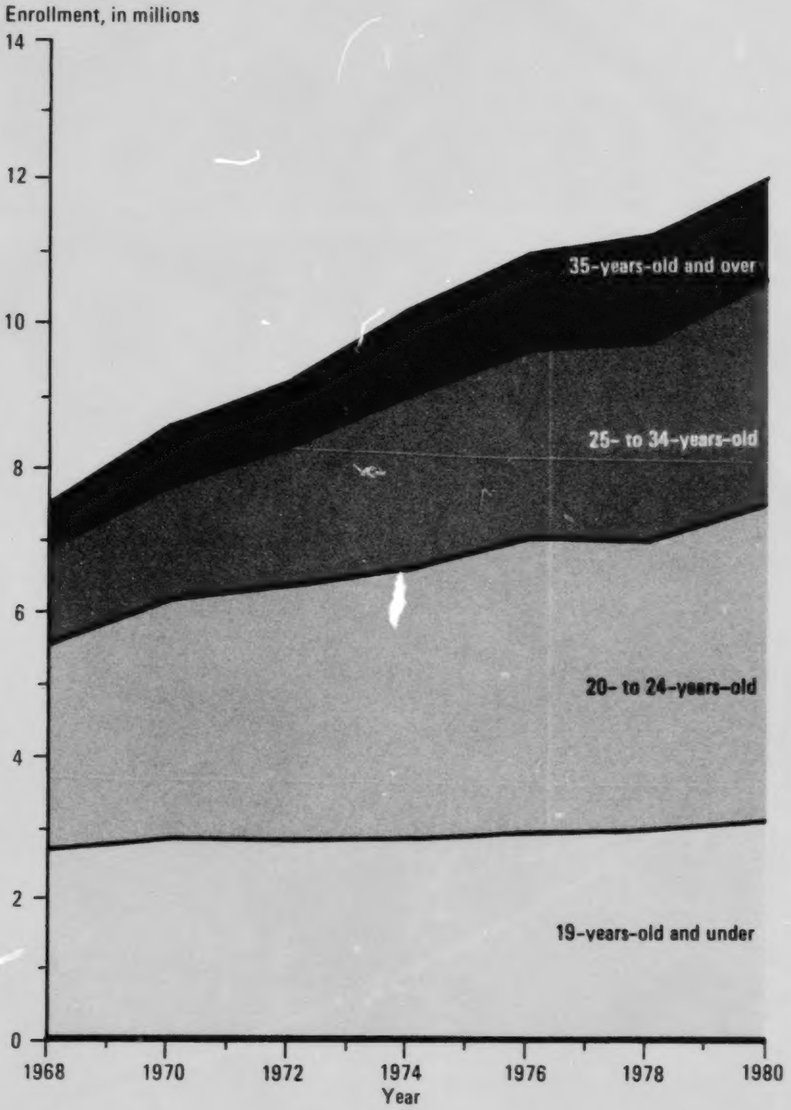
Age Distribution of College Students 14 Years Old and Over: October 1968 to October 1980

Age	1968	1970	1972	1974	1976	1978	1980
				Number, in Thousands			
Total, 14 years and over	**7,513**	**8,581**	**9,215**	**10,224**	**11,012**	**11,259**	**12,097**
14 to 17 years	**272**	**258**	**279**	**308**	**256**	**263**	**247**
18 and 19 years	**2,418**	**2,599**	**2,565**	**2,560**	**2,715**	**2,755**	**2,899**
20 and 21 years	**1,793**	**1,880**	**2,054**	**2,191**	**2,255**	**2,212**	**2,424**
22 to 24 years	**1,085**	**1,457**	**1,501**	**1,571**	**1,839**	**1,804**	**1,988**
25 to 29 years	**1,889**	**1,075**	**1,330**	**1,621**	**1,770**	**1,730**	**1,873**
30 to 34 years	**429**	**487**	**587**	**808**	**866**	**1,038**	**1,243**
35 years and over . . .	**627**	**824**	**899**	**1,164**	**1,311**	**1,458**	**1,422**
				Percentage Distribution			
Total, 14 years and over	100.0	100.0	100.0	100.0	100.0	100.0	100.0
14 to 17 years	3.6	3.0	3.0	3.0	2.3	2.3	2.0
18 and 19 years	32.2	30.3	27.8	25.0	24.6	24.5	24.0
20 and 21 years	23.9	21.9	22.3	21.4	20.5	19.6	20.0
22 to 24 years	14.4	17.0	16.3	15.4	16.7	16.0	16.4
25 to 29 years	11.8	12.5	14.4	15.9	16.1	15.4	15.5
30 to 34 years	5.7	5.7	6.4	7.9	7.9	9.2	10.3
35 years and over . . .	8.3	9.6	9.8	11.4	11.9	12.9	11.8

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics to 1988-89* and *Projections of Education Statistics to 1990-91*, forthcoming.

College Enrollment, by Age Group



In 1980, students 25 years old and over comprised over one-third of the total college enrollment, up from one-fourth 12 years earlier.

Table 1.10

School Enrollment and Labor Force Status of Persons 18 to 24 Years Old, by Sex: October 1960 to October 1980

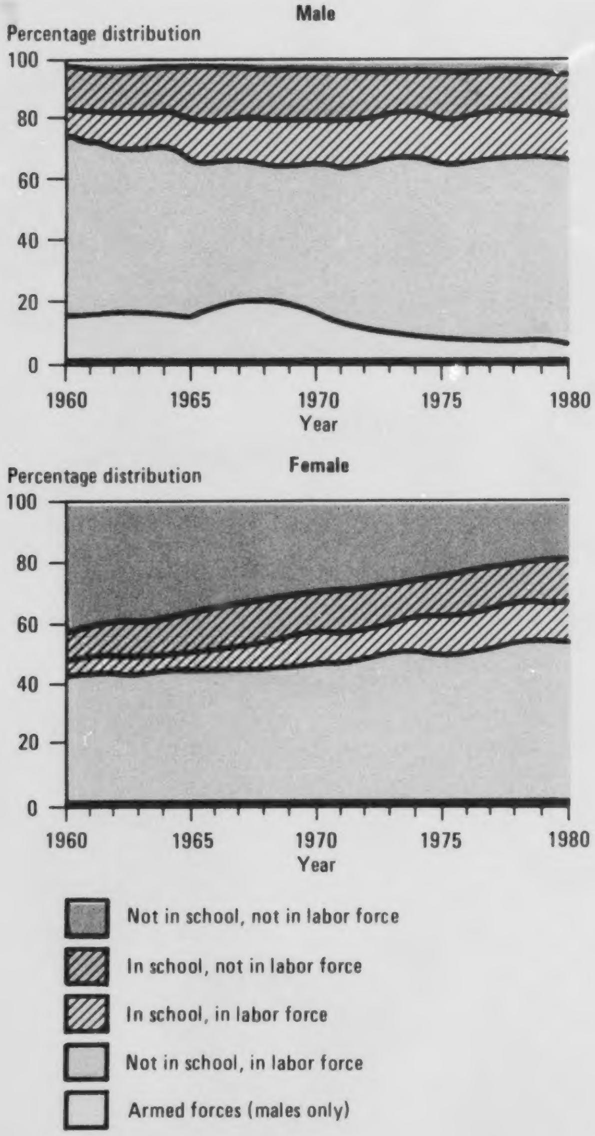
Year and Sex	Total Population	Armed Forces	Enrolled in School		Not Enrolled in School	
			In Labor Force	Not in Labor Force	In Labor Force	Not in Labor Force
			Number, in Thousands			
Male:						
1960	8,215	1,284	785	1,214	4,741	191
1962	8,991	1,502	1,044	1,345	4,767	333
1964	9,507	1,477	1,083	1,487	5,217	243
1966	10,822	1,931	1,468	2,040	5,138	245
1968	11,475	2,224	1,766	1,991	5,096	398
1970	12,297	1,912	1,806	2,077	6,032	470
1972	13,054	1,345	2,037	2,063	7,129	480
1974	13,465	1,150	1,992	1,941	7,878	504
1976	14,071	1,059	2,171	2,094	8,131	616
1978	14,419	1,034	2,186	2,006	8,657	536
1980	14,655	1,003	2,134	2,044	8,794	680
Female:						
1960	8,132	–	373	795	3,492	3,472
1962	8,764	–	451	1,029	3,843	3,441
1964	9,413	–	512	1,162	4,169	3,570
1966	10,622	–	795	1,420	4,711	3,696
1968	11,312	–	942	1,604	5,126	3,640
1970	12,165	–	1,220	1,578	5,702	3,665
1972	12,865	–	1,316	1,734	6,218	3,597
1974	13,355	–	1,566	1,693	6,721	3,375
1976	13,907	–	1,906	1,976	6,893	3,132
1978	14,262	–	1,963	1,790	7,560	2,949
1980	14,478	–	2,131	1,926	7,634	2,787
			Percentage Distribution			
Male:						
1960	100.0	15.6	9.6	14.8	57.7	2.3
1962	100.0	16.7	11.6	15.0	53.0	3.7
1964	100.0	15.5	11.4	15.6	54.9	2.6
1966	100.0	17.8	13.6	18.9	47.5	2.3
1968	100.0	19.4	15.4	17.4	44.4	3.5
1970	100.0	15.5	14.7	16.9	49.1	3.8
1972	100.0	10.3	15.6	15.8	54.6	3.7
1974	100.0	8.5	14.8	14.4	58.5	3.7
1976	100.0	7.5	15.4	14.9	57.8	4.4
1978	100.0	7.2	15.2	13.9	60.0	3.7
1980	100.0	6.8	14.6	13.9	60.0	4.6
Female:						
1960	100.0	–	4.6	9.8	42.9	42.7
1962	100.0	–	5.1	11.7	43.8	39.3
1964	100.0	–	5.4	12.3	44.3	37.9
1966	100.0	–	7.5	13.4	44.4	34.8
1968	100.0	–	8.3	14.2	45.3	32.2
1970	100.0	–	10.0	13.0	46.9	30.1
1972	100.0	–	10.2	13.5	48.3	28.0
1974	100.0	–	11.7	12.7	50.3	25.3
1976	100.0	–	13.7	14.2	49.6	22.5
1978	100.0	–	13.8	12.6	53.0	20.8
1980	100.0	–	14.7	13.3	52.7	19.2

– Not available.

NOTE: Figures for the total population, derived by adding the columns shown here, may not agree with totals shown elsewhere because of differences in survey procedures that affect the sample weights.

SOURCE: U.S. Department of Labor, Employment and Training Administration, *Employment and Training Report of the President,* 1978, and Bureau of Labor Statistics, unpublished data. Estimates of Armed Forces are from the U.S. Department of Commerce, Bureau of the Census, *Current Population Reports,* Series P-20, No. 360, 1980.

Labor Force and School Enrollment Status of 18- to 24-Year-Olds



Increasing percentages of young females entered the labor force and enrolled in school from 1960 to 1980. By 1980, the proportion of females who combined both activities approached 15 percent, equal to the percentage among males.

Table 1.11

College Enrollment Status of Persons 18 to 24 Years Old, by Marital Status and Sex: October 1960 to October 1980

Year and Sex	Total Population	Enrolled in College		Not Enrolled in College		Total Enrolled Below College	Armed Forces
		Married	Single[1]	Married	Single[1]		
			Number, in Thousands				
Male:							
1960	8,244	213	1,435	2,020	2,916	[2]376	1,284
1962	8,919	307	1,709	2,161	2,847	[2]393	1,502
1964	9,499	260	1,885	2,474	2,982	421	1,477
1966	10,870	413	2,562	2,542	2,893	529	1,931
1968	11,473	451	2,701	2,539	2,963	596	2,223
1970	12,296	504	2,827	2,859	3,654	541	1,911
1972	13,058	519	3,015	3,005	4,615	559	1,345
1974	13,466	411	3,000	3,209	5,175	520	1,151
1976	14,071	368	3,305	2,820	5,936	583	1,059
1978	14,418	310	3,311	2,759	6,448	556	1,034
1980	14,676	237	3,367	2,680	6,802	587	1,003
Female:							
1960	8,144	94	856	4,271	2,696	[2]227	–
1962	8,796	84	1,138	4,411	2,878	[2]285	–
1964	9,417	106	1,322	4,614	3,131	244	–
1966	10,629	174	1,750	4,908	3,521	276	–
1968	11,312	214	1,991	5,066	3,702	339	–
1970	12,167	279	2,195	5,420	3,958	315	–
1972	12,865	310	2,414	5,477	4.345	319	–
1974	13,356	359	2,546	5,538	4,560	353	–
1976	13,907	351	3,157	5,209	4,826	364	–
1978	14,262	316	3,057	4,780	5,735	374	–
1980	14,530	305	3,320	4,457	5,966	482	–
			Percentage Distribution				
Male:							
1960	100.0	2.6	17.4	24.5	35.4	[2]4.6	15.6
1962	100.0	3.4	19.2	24.2	31.9	[2]4.4	16.8
1964	100.0	2.7	19.8	26.0	31.4	4.4	15.5
1966	100.0	3.8	23.6	23.4	26.6	4.9	17.8
1968	100.0	3.9	23.5	22.1	25.8	5.2	19.4
1970	100.0	4.1	23.0	23.2	29.7	4.4	15.5
1972	100.0	4.0	23.1	23.0	35.3	4.3	10.3
1974	100.0	3.0	22.3	23.8	38.4	3.9	8.5
1976	100.0	2.6	23.5	20.0	42.2	4.1	7.5
1978	100.0	2.2	23.0	19.1	44.7	3.8	7.2
1980	100.0	1.6	22.9	18.3	46.3	4.0	6.8
Female:							
1960	100.0	1.2	10.5	52.4	33.1	[2]2.8	–
1962	100.0	1.0	12.9	50.1	32.7	[2]3.2	–
1964	100.0	1.1	14.0	49.0	33.2	2.6	–
1966	100.0	1.6	16.5	46.2	33.1	2.6	–
1968	100.0	1.9	17.6	44.8	32.7	3.0	–
1970	100.0	2.3	18.0	44.5	32.5	2.6	–
1972	100.0	2.4	18.7	42.6	33.8	2.5	–
1974	100.0	2.7	19.1	41.5	34.1	2.6	–
1976	100.0	2.5	22.7	37.4	34.7	2.6	–
1978	100.0	2.2	21.4	33.5	40.2	2.6	–
1980	100.0	2.1	22.9	30.7	41.1	3.3	–

– Not available.

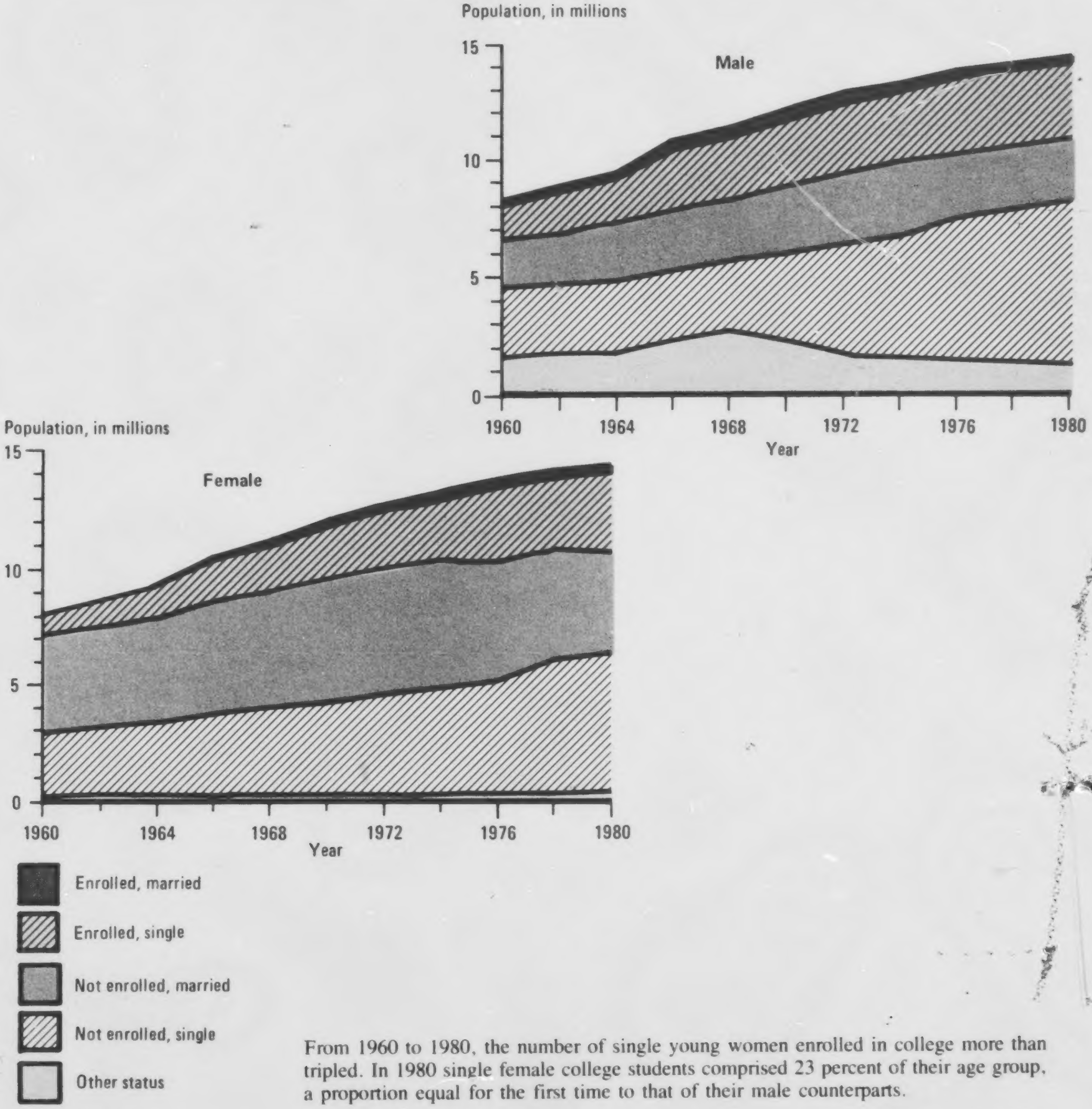
[1] Single includes widowed, divorced, and never married.

[2] Persons 18 to 34 years old.

Source: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-20, various years, and unpublished data.

Chart 1.11

College Enrollment Status of 18- to 24-Year-Olds, by Marital Status and Sex



From 1960 to 1980, the number of single young women enrolled in college more than tripled. In 1980 single female college students comprised 23 percent of their age group, a proportion equal for the first time to that of their male counterparts.

Table 1.12

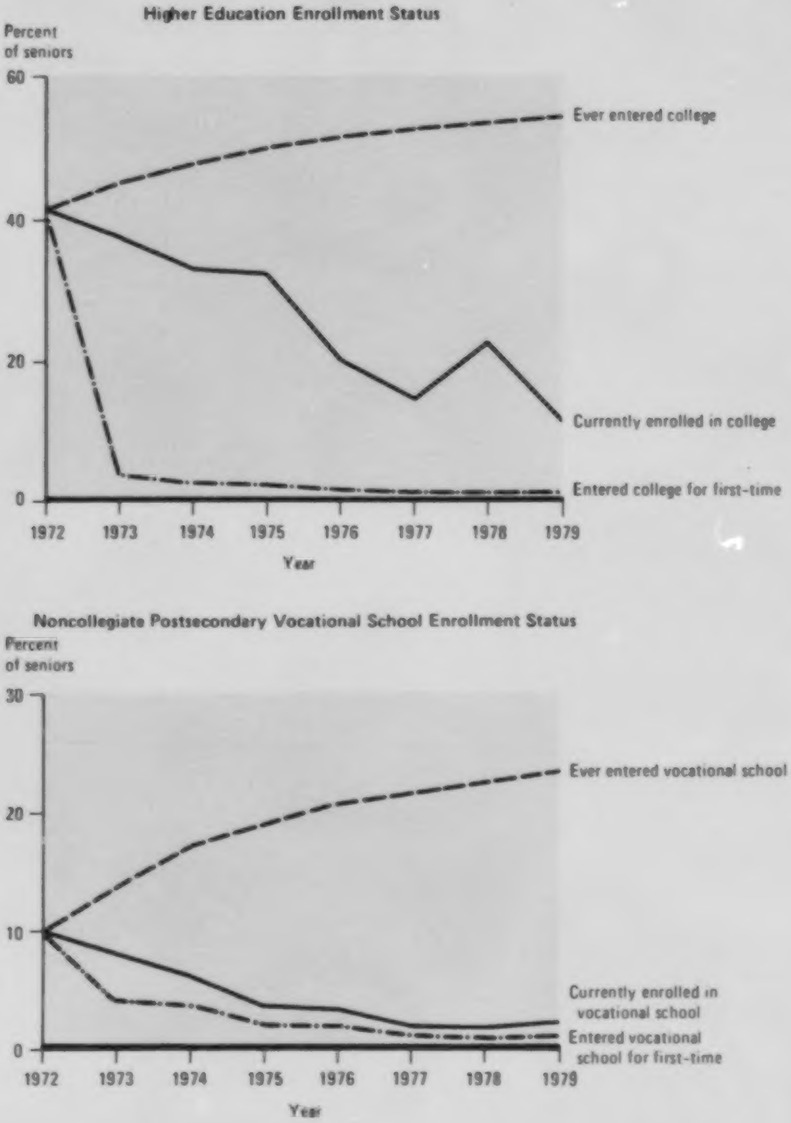
Postsecondary Enrollment Status of 1972 High School Seniors: Fall 1972 to Fall 1979

Year	Average Age	Ever Entered		First Time Enrolled			Currently Enrolled	
		College	Vocational School	College	Vocational School	Graduate School	College	Vocational School
					Percent			
1972 . .	18	41.6	9.8	41.6	9.8	–	41.6	9.8
1973 . .	19	45.3	13.7	3.7	3.9	–	37.8	8.0
1974 . .	20	47.9	17.3	2.6	3.6	–	33.3	6.1
1975 . .	21	50.1	19.2	2.2	1.9	.5	32.7	3.6
1976 . .	22	51.6	21.0	1.5	1.8	3.1	20.3	3.3
1977 . .	23	52.6	22.0	1.0	1.0	4.1	14.5	1.9
1978 . .	24	53.5	22.8	.9	.8	1.7	12.5	1.8
1979 . .	25	54.4	23.8	.9	1.0	1.4	11.3	2.2

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Longitudinal Study of 1972 High School Seniors, unpublished tabulations.

Chart 1.12

Postsecondary Enrollment Status of 1972 High School Seniors Seven Years Following Graduation



Over half of 1972 high school seniors had attended college by 1979 and nearly one-quarter had attended vocational school. Although the proportion who were first-time enrolled students decreased during that time, small but significant percentages were attending postsecondary school as late as 7 years after high school.

Table 1.13

Postsecondary School Plans of High School Seniors, by Social Characteristics: October 1972 to October 1979

Characteristic	1972	1973	1974	1975	1979
Total, in thousands	3,300	3,408	3,518	3,431	3,545
			Percentage Distribution		
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Plan to enter college	**46.2**	**42.9**	**43.6**	**48.9**	**51.4**
May enter college	**27.1**	**28.4**	**26.9**	**25.1**	**23.0**
Some plans to enter vocational school	**12.0**	**10.9**	**10.3**	**9.8**	**9.8**
No plans for college or vocational school	**14.6**	**17.8**	**19.2**	**16.2**	**15.9**
			Percent Who Plan to Enter College		
Male	46.1	43.5	40.9	46.6	48.1
Female	46.3	42.3	46.2	51.4	54.6
White	46.4	43.2	44.6	49.4	51.8
Black	44.6	38.6	36.0	40.5	47.3
Hispanic	49.3	–	47.8	47.8	51.5
Northeast	45.3	45.1	43.2	45.9	51.0
North Central	43.3	36.5	39.0	42.9	48.5
South	47.3	43.2	39.7	50.9	49.8
West	51.3	50.6	58.1	59.1	58.7
School years completed by household head:					
0 to 8 years	29.9	–	27.1	31.6	35.3
9 to 11 years	30.8	–	28.2	36.9	36.3
12 years	44.7	–	41.3	45.3	44.8
1 to 3 years of college	59.4	–	56.3	61.8	65.2
4 years or more of college	75.5	–	69.7	77.5	81.6
Public high school	44.4	41.1	–	47.3	49.4
Private high school	66.3	64.5	–	67.6	74.3

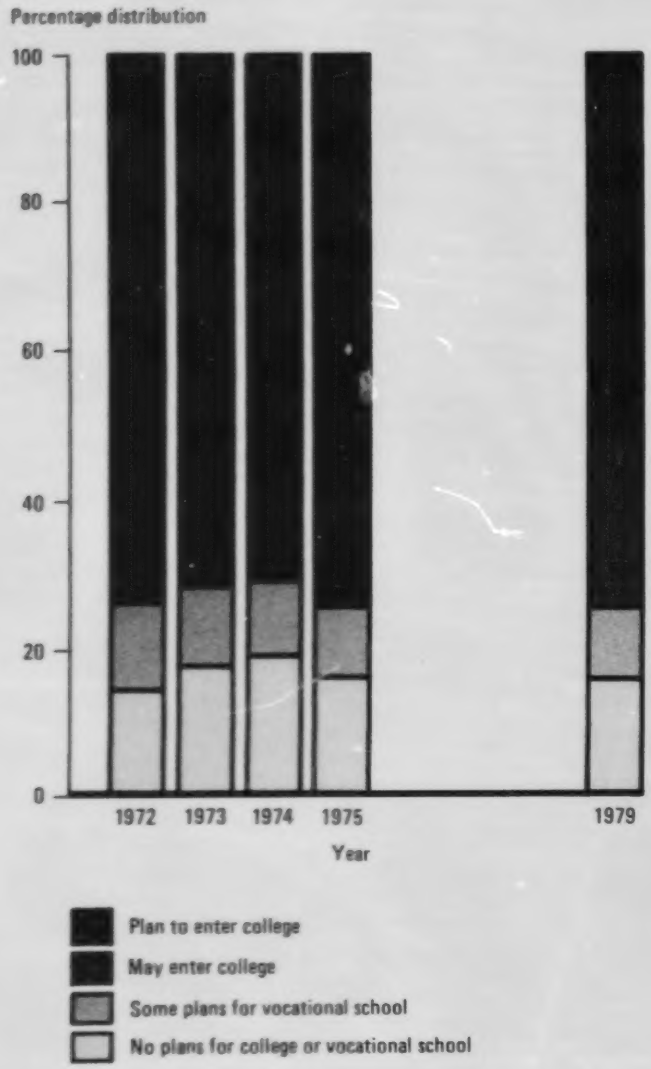
– Not available.

NOTE: About 4 percent of seniors did not report their college plans. These percentages were computed from completely reported cases only.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, "College Plans of High School Seniors", Series P-20, Nos. 252, 270, 284, 299, and unpublished tabulations, selected years.

Chart 1.13

Postsecondary Plans of High School Seniors



The proportion of high school seniors with college plans has risen slightly since the early 1970's; by 1979, over a majority intended to enroll.

Table 1.14

Age Distribution of Population 17 Years Old and Over, and of Participants in Adult Education[1]: Year Ending May 1978 and 1981

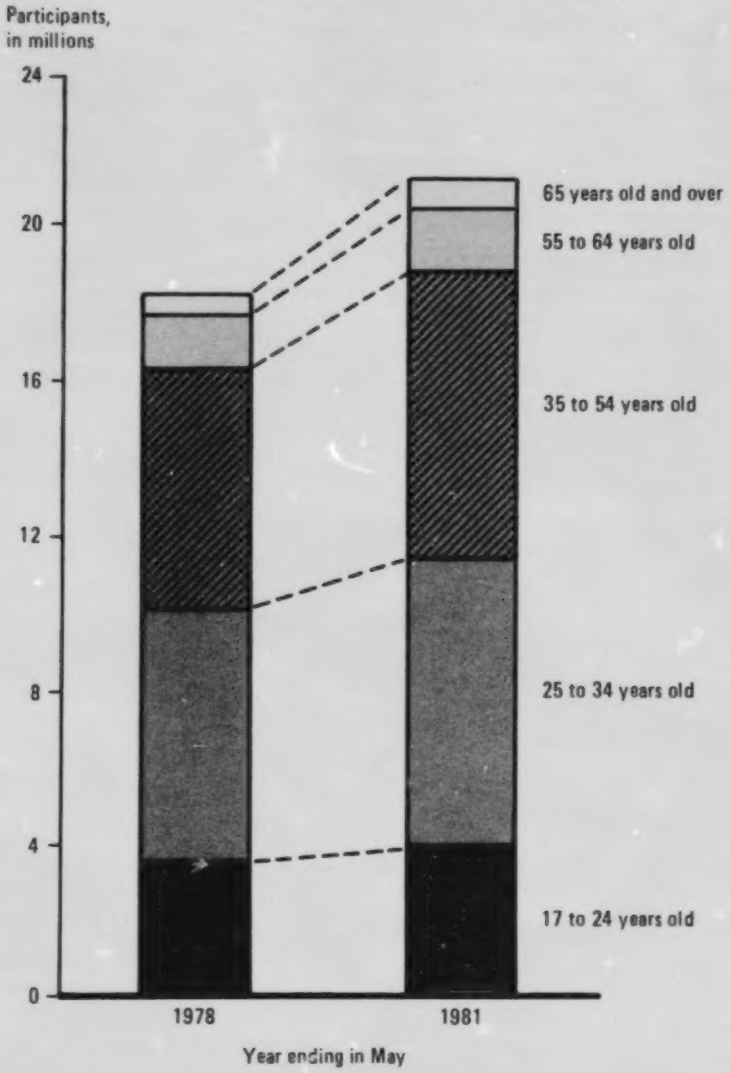
Item	Total	17 to 24 Years Old	25 to 34 Years Old	35 to 54 Years Old	55 to 64 Years Old	65 Years Old and Over
			Numbers, in Thousands			
1978						
Total population:						
Number	154,496	31,730	32,881	46,787	20,391	22,707
Percentage distribution	100.0	20.3	21.3	30.3	13.2	14.7
Participants:						
Number	**18,197**	**3,563**	**6,596**	**6,091**	**1,395**	**551**
Percentage distribution	100.0	19.6	36.2	33.4	7.7	3.0
Participation rate	11.8	11.2	20.1	13.0	6.8	2.4
1981						
Total population:						
Number	165,830	33,073	37,714	48,568	21,722	24,753
Percentage distribution	100.0	19.9	22.7	29.3	13.1	14.9
Participants:						
Number	**21,252**	**3,941**	**7,509**	**7,333**	**1,702**	**768**
Percentage distribution	100.0	18.5	35.5	34.5	8.0	3.6
Participation rate	12.8	11.9	19.9	15.1	7.8	3.1
Percent change in participation rate, 1978 to 1981	+8.5	+6.3	-1.0	+16.2	+14.7	+29.2

[1] All courses and organized educational activities, excluding those taken by full-time students in programs leading to a high school diploma or an academic degree, and other than courses taken as part of occupational training programs of six months or more duration. Full-time students who were also engaged in part-time adult education activities were included as participants.

Source: U.S. Department of Education, National Center for Education Statistics, *Participation in Adult Education Final Report, 1978* and unpublished tabulations from the 1981 Survey of Participation in Adult Education.

Chart 1.14

Adult Education Participants, by Age Group



Over 21 million persons participated in adult education activities in 1981, 3 million more than in 1978. Participation by all age groups grew in absolute numbers and with the exception of the 25 to 34 year old group, increased faster than the population increased.

Table 1.15

Education Attainment Over Time of Adult Cohorts, by Sex: March 1965 to March 1980

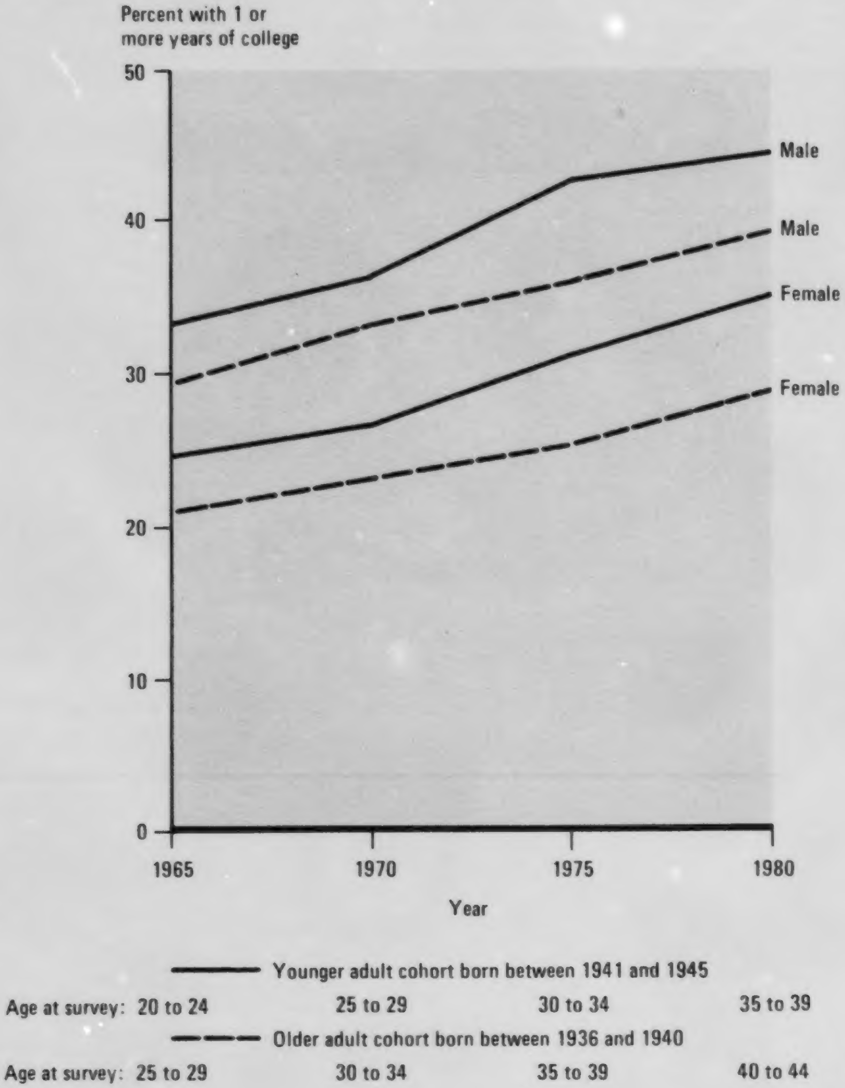
Years of School Completed	1936 to 1940 Birth Cohort				1941 to 1945 Birth Cohort			
	Age 25 to 29 in 1965	Age 30 to 34 in 1970	Age 35 to 39 in 1975	Age 40 to 44 in 1980	Age 20 to 24 in 1965	Age 25 to 29 in 1970	Age 30 to 34 in 1975	Age 35 to 39 in 1980
				Number, in Thousands				
Male	5,350	5,577	5,549	5,579	6,074	6,659	6,728	6,718
0 to 8 years	656	657	640	616	586	595	508	557
9 to 11 years	921	935	836	693	1,076	961	844	751
12 years	2,204	2,140	2,080	2,086	2,396	2,693	2,516	2,435
1 or more years college	1,569	1,845	1,994	2,182	2,017	2,409	2,861	2,975
1 to 3 years college	735	764	812	874	1,555	1,078	1,128	1,193
4 years college	505	576	592	627	368	756	842	797
5 years or more college	329	505	590	681	94	575	891	985
Female	5,677	5,775	5,891	5,957	6,699	6,854	6,971	7,085
0 to 8 years	579	560	591	563	457	456	514	456
9 to 11 years	1,119	1,047	1,053	928	1,312	1,308	1,070	970
12 years	2,790	2,833	2,763	2,759	3,278	3,263	3,223	3,185
1 or more years college	1,190	1,334	1,485	1,707	1,655	1,826	2,165	2,476
1 to 3 years college	652	706	774	827	1,216	942	1,042	1,205
4 years college	429	458	452	559	397	676	737	762
5 years or more college	109	170	259	321	42	208	386	509
				Percentage Distribution				
Male	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
0 to 8 years	12.3	11.8	11.5	11.0	9.7	8.9	7.6	8.3
9 to 11 years	17.2	16.8	15.1	12.4	17.7	14.4	12.5	11.2
12 years	41.2	38.4	37.5	37.4	39.5	40.4	37.4	36.2
1 or more years college	**29.3**	**33.1**	**35.9**	**39.1**	**33.2**	**36.2**	**42.5**	**44.3**
1 to 3 years college	13.7	13.7	14.6	15.7	25.6	16.2	16.8	17.8
4 years college	9.4	10.3	10.7	11.2	6.1	11.4	12.5	11.9
5 years or more college	6.2	9.1	10.6	12.2	1.6	8.6	13.2	14.7
Female	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
0 to 8 years	10.2	9.7	10.0	9.5	6.8	6.7	7.4	6.4
9 to 11 years	19.7	18.1	17.9	15.6	19.6	19.1	15.3	13.7
12 years	49.2	49.1	46.9	46.3	48.9	47.6	46.2	45.0
1 or more years college	**21.0**	**23.1**	**25.2**	**28.7**	**24.7**	**26.6**	**31.1**	**34.9**
1 to 3 years college	11.5	12.2	13.1	13.9	18.2	13.7	15.0	17.0
4 years of college	7.6	7.9	7.7	9.4	5.9	9.9	10.6	10.8
5 years or more college	1.9	2.9	4.4	5.4	.6	3.0	5.5	7.2

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, "Population Characteristics: Educational Attainment", Series P-20, No. 158, 1966, No. 207, 1970, and unpublished tabulations.

Chart 1.15

Percent of Adult Age Cohorts Who Completed 1 or More Years of College Over Time



Over time, greater proportions of adults gained some college experience, rising by some 10 percentage points for most groups during the 15-year period.

Chapter 2
Elementary/Secondary Education

Elementary and secondary education is that component of the education system that is most sensitive to dramatic changes in birthrate. Just such changes have characterized the past 25 years of births in this country. During that time, the number of births increased to the highest point then decreased rapidly to about two-thirds the number in the peak year (U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 704). The United States has a commitment to provide a basic education to all children, and these changes placed strains on the elementary and secondary education system. At the same time, social and economic shifts resulted in new issues that required further accommodations. The civil rights struggles of blacks in the 1960's, for example, affected the way education was provided to many children. And during the 1970's, a recognition of the right to a basic education for other minorities, as well as for the handicapped, also mandated change and accommodation. The rapid inflation of the past decade and the recent history of State-legislated limitations on property taxes were features of the economic climate that influenced financial support of elementary and secondary education.

This chapter examines the enrollment changes and their effect on school organization. First, public elementary and secondary education is addressed, and then the role of private education during these enrollment changes is explored. The ways in which enrollment trends affected the financing of public schools are examined in light of concurrent economic shifts. The last section presents a look at various issues of the past 20 years that have affected elementary/secondary education.

Students and Schools

Enrollment in elementary and secondary schools is closely tied to the size of the population they serve. This segment of our Nation's population, the 5- to 17-year-olds, began to decline in the last decade, and the trend is expected to continue, at least through 1984 (see entry 1.1). The effect of this population trend on enrollment was direct: in 1970, nearly 51.3 million students enrolled in elementary/secondary schools compared to 46 million in 1980 (entry 2.1). Enrollment decreases at the elementary level (kindergarten to 8th grade) began in 1970 and continued through 1980, and a similar trend occurred in grades 9 to 12 beginning in 1977. At the lower grade levels, enrollment growth is projected to begin in 1985 and continue through the end of the decade. By 1990, the enrollment in kindergarten to 8th grade is projected to be near 1975 levels. In grades 9 to 12 the general trend projected through 1990 is downward, with enrollment in that year estimated at a level 21 percent lower than the peak year, 1976.

The enrollment changes had profound effects on the public sector. In the 1960's, public schools were faced with enrollment increases ranging between 2 and 4 percent each year. This growth was accompanied by all of the problems that such expansion entails. Two immediate problems associated with enrollment growth were providing schools and teachers. However, the number of schools decreased, from 117,637 in 1959 to under 90,000 by 1970 (entry 2.2), but this trend was a result of consolidation: larger schools were being built to replace overcrowded and outdated smaller schools. For example, there were more than 20,000 one-teacher schools in 1959, but by 1970 there were fewer than 2,000 (see NCES, *Digest of Education Statistics, 1981*). The number of teachers grew at an even faster rate than enrollment — about 4 percent each year during the 1960's.

These trends were reversed or severely modified in the 1970's. Enrollment began decreasing until, by the second half of the decade, the declines averaged nearly 2 percent each year. The growth rate in the number of teachers slowed, and by late in the decade it decreased, although at an average of less than 1 percent per year. The number of schools continued to drop, but at a much slower rate than in the 1960's. Decreases in the number of schools were more likely to be a result of closing schools due to declining enrollment in the 1970's than a result of building larger schools and closing small ones, as was the case in the earlier decade.

These trends in enrollment, number of schools, and teachers affected the structure of public elementary/secondary education. The average number of students per school rose throughout the 1960's as enrollment increased and the number of schools decreased, then it began to decline with enrollment reversals and a slowing of the downward trend in the number of schools. The average number of teachers per school rose throughout the entire 20-year period because of increasing numbers of teachers and decreasing numbers of schools.

The 10 percent decline in public elementary/secondary enrollment between 1970 and 1980 was not uniform across the States (entry 2.3). During that period four States —

Delaware, Rhode Island, North Dakota and South Dakota — and the District of Columbia registered decreases of more than 20 percent. In eight States there were actually increases: Arizona, Nevada, Utah, Wyoming, Idaho, Florida, New Hampshire, and Texas. In most States that had significant enrollment declines, the number of schools also declined during the 1970's.

Although the number of schools declined during the 1970's, it was primarily a result of a drop in the number of very small and very large schools (entry 2.4). The number of schools with fewer than 50 students and with 50 to 99 students dropped by nearly 13 and 16 percent, respectively. Schools with 1,000 to 1,999 students and those with 2,000 students or more declined in number by 11 and 5 percent, respectively. At the same time, schools with 250 to 499 students increased by 16 percent. By type of school, the changes in number reflected both enrollment changes and changes in policy. The number of elementary schools dropped by more than 5 percent, reflecting the severe declines in enrollment at that level. The number of schools in the "other" category, which consists primarily of combined elementary/secondary schools, dropped by more than 27 percent. This decline was a result of the movement toward separate schools for younger and older age groups, and a recognition of the need for such specialized facilities as laboratories and gymnasiums for secondary school students. Schools not classified by grade level include those serving special education and handicapped students. These more than doubled in number during the 1970's as policies supporting the need to educate all children took effect.

Elementary/secondary education enrollment in the private sector is not as closely tied to population size as is public school enrollment. Private schools can or must choose the number of students they will admit while the public sector is required to educate all children not attending private schools. In the early 1960's, private schools enrolled about 13 percent of all elementary/secondary students (entry 2.5). By 1970, when the number of 5- to 17-year-olds was at its peak, enrollment in private schools had dropped to 10 percent of total enrollment. But given the size of the population, that proportion represented a peak size of more than 5.3 million students. The proportion of students enrolled in private schools began to rise again during the 1970's reaching nearly 11 percent by 1980, but the number of students had dropped to just over 5 million.

Just as changes in enrollment in public schools varied by area of the country, so did private school enrollment. The Middle Atlantic States had the highest proportion of its enrollment in private schools throughout the past 20 years, although that proportion dropped from nearly 22 percent in 1960 to just under 17 percent by 1980. In the South Atlantic and East South Central States, the proportion enrolled in private schools generally rose during that period, ranging between 5 and 6 percent in 1960 to between 8 and 9 percent by 1980. The Mountain States had the smallest proportion of private school students in 1980; only 5 percent of students in this area attended private elementary/secondary schools.

Concentrations of private school students in any given area of the country depends to a large extent upon the concentration of urban centers within that area. In 1979, private school enrollment accounted for 16 percent of the total in central cities, but only 10 percent in metropolitan areas outside of central cities (suburbs) and 5 percent in nonmetropolitan (rural) areas (entry 2.6). The Northeast region, which contains, within a small area, a number of large cities, enrolled 20 percent of its students in central city private schools in 1979, although this was a drop from a high of nearly 26 percent in 1970. Private school enrollment in rural areas of the South and West represented less than 5 percent of the total throughout the 1970's.

Public School Finance

Revenues of public schools rose from $14.7 billion in 1960 to $40.3 billion in 1970, an increase of nearly 175 percent (entry 2.7). During that decade enrollment increased by 31 percent. In the following decade, revenues increased 119 percent, to $88.0 billion by 1979, at the same time that enrollment was declining by 9 percent. In the earlier period, the revenue increases appear to be reflecting primarily enrollment increases and new initiatives to serve disadvantaged children, although at the same time the Consumer Price Index (CPI) increased by nearly 29 percent. But inflation appears to be the strongest factor affecting the need for revenue increases in the 1970's; between 1970 and 1979, the CPI rose by more than 81 percent.

Public schools receive revenue from three main sources: Federal, State, and local governments. Until the early 1970's, local governments were the primary sources of revenue for public schools; more than half of school revenues came from this source before 1975. In 1975-76, local government support for public schools represented only 47 percent of the total. And in 1979, for the first time, revenues for public schools from State sources exceeded those from local sources.

Federal sources accounted for just under 10 percent of public school revenues in 1979, but this was more than twice the proportion in 1960. The largest jump in the Federal portion occurred when the Elementary and Secondary Education Act (ESEA) of 1965 was passed. Included in the legislation was an authorization of grants for elementary and secondary school programs for children of low-income families (Title I of the ESEA). In 1964, Federal funds for support of elementary/secondary schools in providing educationally deprived/economic opportunity programs amounted to $67.2 million. In 1966, after passage of ESEA, which included Title I as the major component, Federal funding for this purpose amounted to more than $1.15 billion; and in 1979, nearly $4.1 billion (see NCES, *Digest of Education Statistics, 1981*).

Of the $8.6 billion in Federally provided revenue receipts of public schools, $2.6 billion was authorized by Title I in 1979 (entry 2.8). That represented an average of nearly 3 percent of all public elementary/secondary school revenues in the 50 States and District of Columbia. But there were variations in that proportion by State: in Nevada, Title I monies accounted for 1.4 percent of revenues; in Mississippi, the proportion was more than 9.8 percent. Most of the Southern States each had Title I to total revenue ratios of over 4 percent.

Public school systems use most of the revenues collected from Federal, State, and local sources for current expenditures. These include local administration, instruction, attendance and health services, pupil transportation, operation and maintenance of plant, and fixed charges. In 1959-60, these amounted to nearly $11.8 billion, increasing to $32.8 billion by 1969-70 and to $70.6 billion by 1978-79 (entry 2.9). Current expenditures for instruction accounted for the largest proportion, 67.5 percent in 1978-79. This proportion was lower than in 1959-60 and 1969-70, when instruction represented 71 percent of current expenditures. Local administration and pupil transportation took larger proportions of the amount spent in 1978-79 than in the earlier years.

Just as revenues are not tied exclusively to enrollment, neither are expenditures. During the 1970's, when enrollment was declining, current expenditures per student increased (entry 2.10). Even when adjusted for inflation expenditures per student increased each year between 1970-71 and 1978-79. A large portion of this increase may be attributed to the fact that two-thirds of current expenditures is for instruction (teachers' salaries) and the average number of teachers per 1,000 students was increasing throughout this period. Another of the major factors that contributed to expenditure increases was that most of the enrollment decline was occurring at the elementary level until 1975, while secondary enrollment continued to increase in the first half of the decade. A general rule, recognized in many State aid formulas, is that secondary students cost approximately 1.5 times as much to educate as elementary students. Thus, the cost per student was forced upward by the movement of students from the elementary to the secondary levels. In 1970, secondary (grades 9 through 12) students represented 29 percent of enrollment; by 1975, they accounted for 32 percent, and this proportion remained between 32 and 34 percent throughout the rest of the decade (see entry 2.1).

Public schools are dependent on government for their support through various kinds of taxation. Thus, they depend upon the public's willingness to be taxed for this purpose. To measure the change in public attitudes, an annual survey of the public on attitudes toward the public schools (conducted by the Gallup Poll) included a question on attitudes toward raising taxes for support of schools in 1969 through 1972. The question was repeated in 1981 (entry 2.13). The results show that the proportion of the public that favored raising taxes for schools was lower in 1981 than in any of the earlier years. Less than one-third, 30 percent, favored raising taxes in 1981 compared to 45 percent in 1969. The data for the later year were taken in a time when the general political and economic climate indicated a retrenchment from taxation and government spending. Some States had passed legislation limiting property taxes, and State and Federal level spending were being curtailed for many government functions.

Current Issues

Declining enrollment and finances were two of the major issues facing elementary/secondary education in the past decade. But at the same time, many other areas were the subject of public discussion, policy formation, and even contention. Some of these issues found their way into the courts for resolution. Between 1977 and 1981, the reported number of civil cases involving students was 1,734 (entry 2.12). While this figure is believed to be an underestimate of the total (about two-thirds), the types of cases reported provide a fairly complete framework for examining the issues of this period. More than two out of five involved education of handicapped children. In 1975, Congress passed the Education for All Handicapped Children Act (Public Law 94-142), which mandates that all handicapped children have available to them a free appropriate public education. Next, in order of frequency, were civil cases involving discipline (290 cases), regulation of sports (186 cases), equal protection (165 cases), benefits and services from schools (121 cases), religion (73 cases), freedom of speech and privacy (65 cases), and academic matters (30 cases).

Data from the NCES High School and Beyond Study give an indication of ways in which some of these issues have affected students and schools. In 1980, 3.8 percent of high school seniors had participated in programs that offered special education for the educationally handicapped and 3.6 percent in programs for the physically handicapped (entry 2.13). Black and Hispanic students were significantly more likely than whites to have participated in these programs, and students in the low socioeconomic status (SES) level more likely than those in the middle SES level. While proportions for American Indians and Asians or Pacific Islanders were higher than for whites, their numbers in the sample were too small to determine statistical significance.

Other programs that began or flourished during the 1970's as a response to issues raised during the decade included bilingual/bicultural education, family life/sex education, and alcohol or drug abuse education. Thirteen percent of the high school class of 1980 had participated in bilingual/bicultural programs, with the proportion about one out of five for Hispanic and Asian students. Nearly half of all seniors (48 percent) had participated in a family life/sex education program by 1980. The proportion was over half for students in all regions except the South, where it was 38 percent. Thirty-nine percent had participated in alcohol or drug abuse programs, again with the proportion lower in the South than in other regions.

Programs in alcohol or drug abuse education were offered in response to the public's view of alcohol and drug use as a major problem in the schools. In annual Gallup Polls on attitudes toward the public schools, this problem was the second most commonly cited by the public. High school principals also cited it as the second most serious discipline problem after absenteeism (entry 2.14). Only 7 percent of the principals surveyed said that student use of drugs or alcohol was not at all a problem in their schools.

The transportation of students by bus to achieve racial balance continued to be an issue throughout the decade. But in 1980, only 8 percent of all sophomore students attended schools in which busing for racial balance was used (entry 2.15). This proportion was lowest in the West North Central area of the country, where only 1.5 percent of sophomores attended such schools. It was highest in the South Atlantic and East South Central areas, where the proportions were 16.3 and 14.6 percent, respectively. Variations by area of the country were not as great as variations by type of community, however. In urban communities, nearly 1 in 4 sophomores attended schools that bused students for racial balance compared to 5 percent in suburban communities and only 1 percent in rural communities.

Issues involving academic matters played a major role in shaping elementary and secondary education. Chief among these include competency testing and grade inflation. By 1980, 38 States had passed legislation requiring minimum competency testing to assure that students were gaining basic skills and knowledge (see *Condition of Education*, 1980 and 1981). This legislation was passed in an atmosphere of declining test scores on national assessments and college entrance exams (see chapters 3 and 5) and during a period when many people were demanding a return to basic skills instruction. Many States that legislated minimum competency tests set 1980 or later as the year in which the first graduating class would be assessed. Thus, the effects of this legislation cannot be determined for a few years yet. In 1980, 25 percent of high school seniors attended schools that required passing a minimum competency test in order to graduate (entry 2.16). Most States in the Midwest do not have this requirement. Only 7 percent of seniors in that region were required to pass a test. The proportions in the other regions were much higher: 23, 36, and 42 percent in the South, Northeast, and West, respectively.

High school students in the spring of their senior year in 1972 reported their high school grades. More than one-quarter, 28 percent, reported they had received mostly A's and B's while in high school (entry 2.17). The same question was asked of high school seniors in the spring of 1980. This time nearly one-third reported they had mostly A's and B's in high school. Catholic school seniors were more likely than public school seniors to have high grades in high school in both years, and other private school seniors in 1980 were more likely than public school seniors to have earned A's and B's. (Because of the small school sample size, the heterogeneity of the schools, and the high nonresponse rate for schools in this sector, the estimates for other private schools are not as accurate or interpretable as those for public or Catholic schools). The same question was asked of high school sophomores in 1980, but only 27 percent reported they had received A's and B's compared to 33 percent of 1980 seniors. Also, nearly 4 percent of sophomores reported they had earned D's and lower grades compared to just over 1 percent of seniors. The differences in this case may be in the grade level assessed. High school sophomores are more likely to be a group that contains potential dropouts and/or students that may be held behind to repeat a grade than are seniors in the spring of the year they are to graduate.

English and mathematics are the two course areas most often considered "basic" at the high school level. They are the courses most likely to be required, and college entrance examinations measure achievement primarily in these two areas. In 1980, more than one-third of sophomores said they had taken remedial English and remedial mathematics, and about 30 percent of seniors had taken such subjects (entry 2.18). There were significant differences in these proportions by such student characteristics as race/ethnicity, sex, and socioeconomic status (SES). Blacks, Hispanics, and American Indians were significantly more likely than whites to have taken remedial mathematics, and Asians were significantly less likely to have done so. Females were less likely than males to have taken either remedial English or remedial mathematics. The higher the SES level, the less likely a student was to have taken remedial courses in these subjects.

The proportion of students taking advanced or honors courses in English and mathematics was somewhat lower than the proportion taking remedial courses. Twenty-three percent of sophomores and 27 percent of seniors had taken advanced English, and the proportions having taken advanced mathematics were 24 and 23 percent for sophomores and seniors, respectively. Again, there were differences by student characteristics. Asians were more likely than whites to have taken advanced courses in both English and mathematics, and Hispanics were less likely than whites to have taken these advanced courses. Sophomore females were more likely than males to have taken advanced English (25 percent compared to 20 percent) but slightly less likely to have taken advanced math (23 versus 25 percent). For seniors, the differences between males and females still held: 29 percent of females had taken advanced English compared to 24 percent of males, and one out of four males had taken advanced math compared to one out of five females. The student characteristic associated with the largest differences, however, was socioeconomic status. Seniors from families at the highest SES level were twice as likely as those at the lowest level to have taken advanced courses. The differences in socioeconomic status were likely to have accounted for most of the differences by race/ethnicity.

Another area of concern in recent years has been the comparison between public and private schools. Whether private schools provide a higher quality education and whether they are due some government support through tuition tax credits or other measures are two of the major issues under discussion. In 1981, the Gallup Poll on public attitudes toward the public schools asked whether an increase in the number of private schools was a good or bad thing for the Nation. Forty-nine percent of the respondents said it was a good thing, but the proportions were quite different for parents with children in public schools than for those with children in private schools — 44 percent and 63 percent, respectively (entry 2.19). The same poll asked whether some government tax money should be used to help parochial (church-related) schools. Forty percent favored such use of government funds in 1981, down from the 48 percent in favor when the same question was asked in 1970. This decrease corresponds to the decline in those who favored raising taxes for public schools (see entry 2.11).

The quality of education provided in public versus private schools is very difficult to measure. While studies have shown that average test scores of students in Catholic and other private schools are generally higher than in public schools, a great deal of controversy surrounds those results and what they mean. For example, the August/September, 1981, issue of *Educational Researcher* (Volume 10, Number 7) gives the arguments of two noted researchers as to the meaning of the results provided by the same data base, the 1980 High School and Beyond Survey. Certainly there seems to be some difference among types of schools in the teaching methods used. Seniors of both the 1972 and 1980 classes were asked the frequency with which various methods were used in courses they had taken (entry 2.20). In both years, Catholic and other private school seniors were more likely than public school seniors to have taken courses in which student-centered discussions were used frequently or fairly often. (Again, the data for other private schools may not be as accurate or interpretable as that for public and Catholic schools because of sampling and nonsampling error). There was little or no difference in the amount of project or laboratory work used as a teaching method. One of the biggest differences among types of schools was in the proportion of seniors in both years who said writing was frequently or fairly often required: in 1980, the proportions were 61, 73, and 84 percent for public, Catholic, and other private schools, respectively. But again, care should be taken in interpreting these results. Public schools are more likely than other types of schools to have students divided among vocational, general, and academic programs, while Catholic and other private schools have larger proportions in academic or general programs with very few in vocational programs. Students in academic programs, whatever type of school they are in, might be expected to do more writing than those in vocational programs. Use of two other teaching methods increased somewhat between 1972 and 1980: use of individual instruction and use of teaching machines or computer-assisted instruction. Computers were used with greater frequency in public than in Catholic or other private schools in 1980.

It is unlikely that controversy surrounding the various issues discussed here will cease. Data need to be gathered to address these issues more fully, and new policy is likely to be formulated based on the information provided as well as on the economic and political climate during the next decade. New educational issues will surely arise in the future and continue to generate debate, study, and resolutions.

Table 2.1

Enrollment in Regular Day Schools, by Control of Institution and Grade Span: Fall 1970 to 1990

Fall of Year	Public and Private Schools			Public Schools			Private Schools		
	Total	Grades K-8	Grades 9-12	Total	Grades K-8	Grades 9-12	Total	Grades K-8	Grades 9-12
				In Thousands					
1970	51,272	36,629	14,643	45,909	32,577	13,332	5,363	4,052	1,311
1971	51,281	36,165	15,116	46,081	32,265	13,816	[1] 5,200	[1] 3,900	[1] 1,300
1972	50,744	35,531	15,213	45,744	31,831	13,913	[1] 5,000	[1] 3,700	[1] 1,300
1973	50,430	35,053	15,377	45,429	31,353	14,077	[1] 5,000	[1] 3,700	[1] 1,300
1974	50,053	34,621	15,432	45,053	30,921	14,132	[1] 5,000	[1] 3,700	[1] 1,300
1975	49,791	34,187	15,604	44,791	30,487	14,304	[1] 5,000	[1] 3,700	[1] 1,300
1976	49,484	33,831	15,653	44,317	30,006	14,311	5,167	3,825	1,342
1977	48,716	33,133	15,583	43,577	29,336	14,240	5,140	3,797	1,343
1978	47,636	32,060	15,576	42,550	28,328	14,223	5,085	3,732	1,353
1979	46,679	31,585	15,094	41,579	27,885	13,694	[1] 5,100	[1] 3,700	[1] 1,400
1980	46,013	31,343	14,670	40,984	27,671	13,313	5,029	3,672	1,357
				Projected					
1981	45,189	30,956	14,233	40,189	27,356	12,833	5,000	3,600	1,400
1982	44,544	30,761	13,783	39,544	27,161	12,383	5,000	3,600	1,400
1983	44,165	30,623	13,542	39,165	27,023	12,142	5,000	3,600	1,400
1984	44,039	30,505	13,534	39,039	26,905	12,134	5,000	3,600	1,400
1985	44,166	30,551	13,615	39,166	26,951	12,215	5,000	3,600	1,400
1986	44,556	31,059	13,497	39,456	27,359	12,097	5,100	3,700	1,400
1987	45,004	31,787	13,217	39,804	27,987	11,817	5,200	3,800	1,400
1988	45,358	32,522	12,836	40,158	28,722	11,436	5,200	3,800	1,400
1989	45,905	33,347	12,558	40,605	29,447	11,158	5,300	3,900	1,400
1990	46,667	34,244	12,423	41,267	30,244	11,023	5,400	4,000	1,400

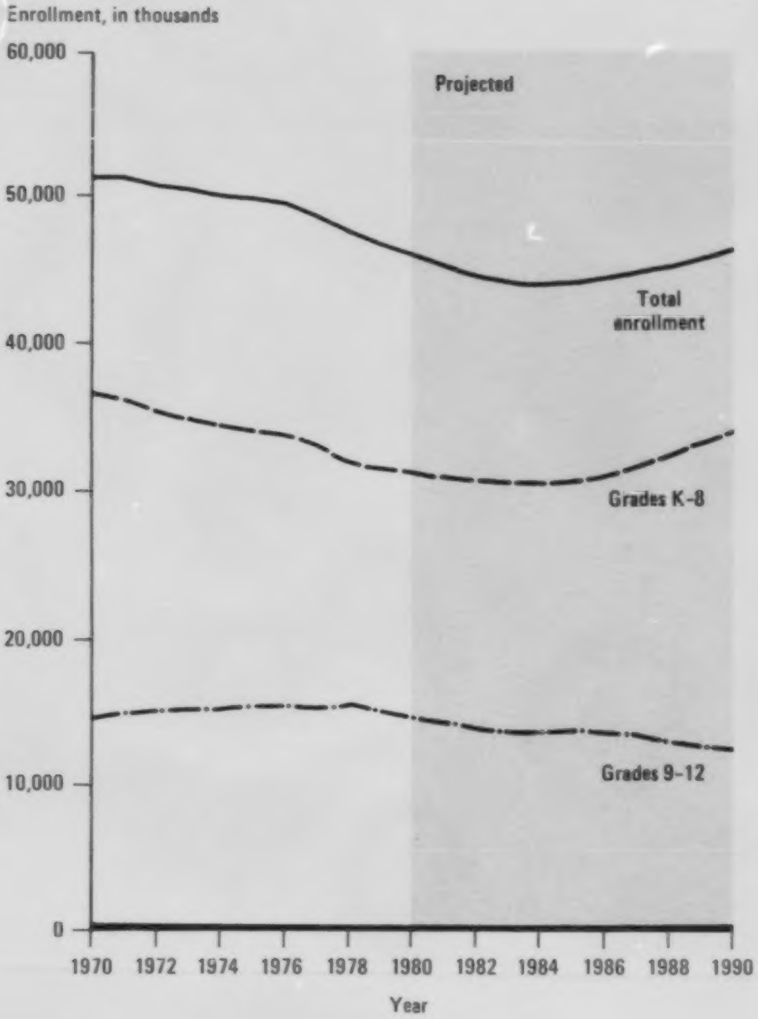
[1] Estimated.

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics to 1990-91*, forthcoming.

Chart 2.1

Enrollment in Regular Day Schools



Enrollment in kindergarten to eighth grade has been dropping since 1970, but the decline did not reach the grades nine to twelve until 1977. Enrollment in the higher grades will continue to decline throughout the next decade, but at the lower grade level, increases are expected beginning in 1986.

Table 2.2

Public Elementary and Secondary Schools, Enrollment, and Teachers: Fall 1959 to 1980

Fall of School Year	Enrollment, in Thousands	Schools	Teachers, in Thousands	Students per School	Teachers per School	Teachers per 1,000 Students
1959	35,182	117,637	1,355	299	11.5	38.5
1961	37,464	107,260	1,461	349	13.6	39.0
1963	40,187	104,015	1,578	386	15.2	39.3
1965	42,174	99,813	1,710	423	17.1	40.6
1967	43,891	94,197	1,855	466	19.7	42.3
1970	45,909	89,372	2,055	514	23.0	44.8
1972	[1]45,744	88,864	[1]2,103	515	23.7	46.0
1974	45,053	88,695	2,166	508	24.4	48.1
1976	[1]44,317	88,597	[1]2,186	500	24.7	49.3
1978	42,550	87,365	[2]2,206	487	25.3	51.9
1980	[1]40,984	[1]86,198	2,187	475	25.4	53.3
			Average Annual Percent Change[3]			
1959 to 1961	3.2	-4.4	3.9	8.4	9.1	0.6
1961 to 1963	3.6	-1.5	4.0	5.4	5.9	.4
1963 to 1965	2.5	-2.0	4.2	4.8	6.3	1.5
1965 to 1967	2.0	-2.8	4.2	5.1	7.6	2.2
1967 to 1970	1.5	-1.7	3.6	3.4	5.6	2.0
1970 to 1972	- .2	- .3	1.2	.1	1.5	1.3
1972 to 1974	- .8	- .1	1.5	- .7	1.5	2.3
1974 to 1976	- .8	- .1	.5	- .8	.6	1.5
1976 to 1978	-2.0	- .7	.5	-1.3	1.2	2.6
1978 to 1980	-1.8	- .7	- .4	-1.0	.2	1.3

[1] Includes estimates for nonreporting States.

[2] Revised from previously published data.

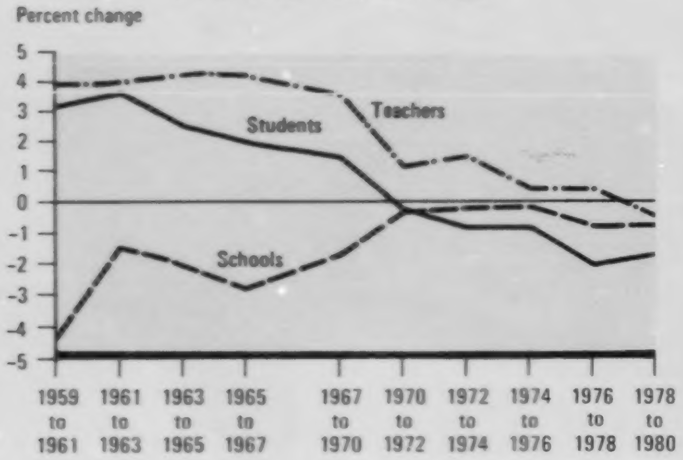
[3] Calculated as the difference between the year listed (the base year) and its successor in the list divided by the base year and the number of intervening years.

Source: U.S. Department of Education, National Center for Education Statistics, *Statistics of Public Elementary and Secondary Day Schools, Fall 1978, Digest of Education Statistics, 1981* and unpublished tabulations.

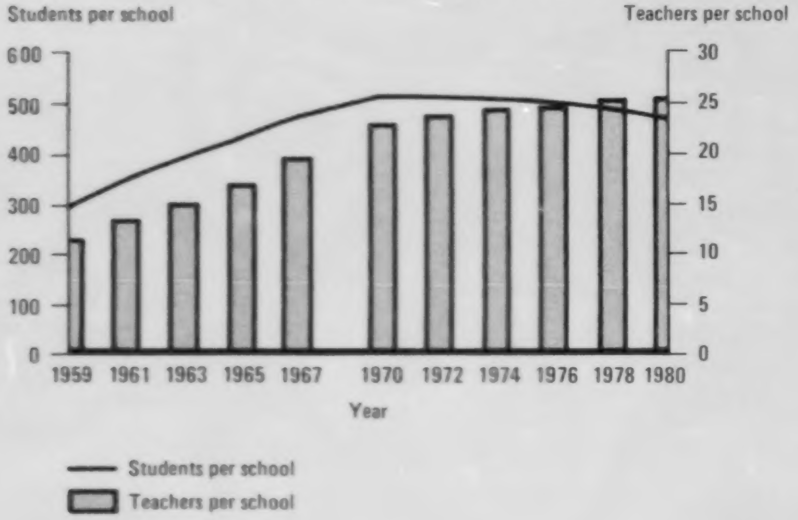
Chart 2.2

Public Elementary/Secondary Students, Teachers, and Schools

Average Annual Percent Change in the Number of Students, Teachers, and Schools



Average Number of Students and Teachers Per School



The number of public school students began dropping in the early 1970's, but the number of teachers did not decline until late in the decade. The number of schools declined throughout the past two decades, first as small schools consolidated and later as schools were closed because of declining enrollment. While the number of students per school began dropping in 1974, the number of teachers per school continued to increase.

Table 2.3

Public School Enrollment and Number of Schools, by State: School Year 1970-71 and 1980-81

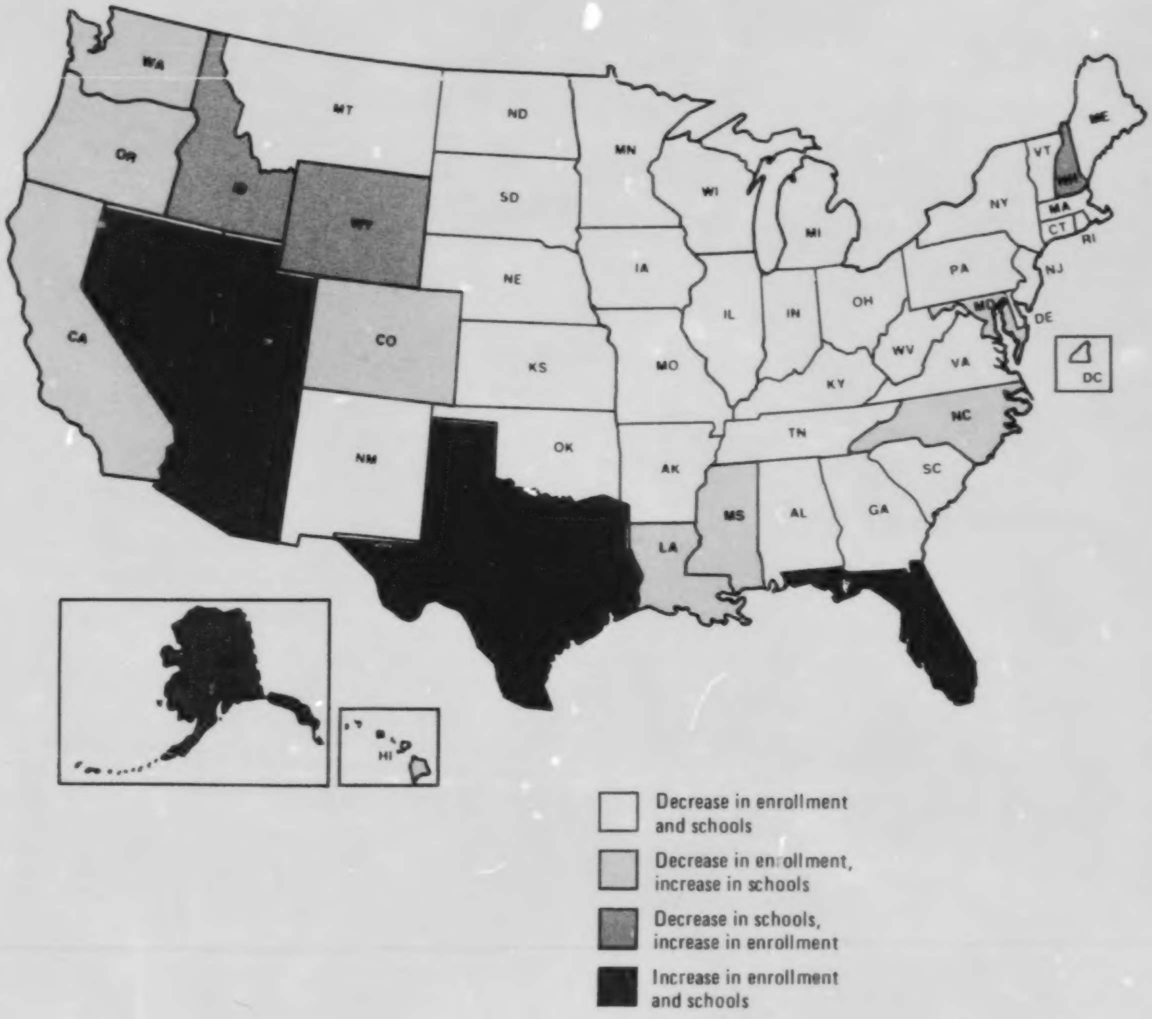
States	Enrollment, in Thousands		Number of Schools		Students per School		Percent Change 1970-71 to 1980-81	
	1970-71	1980-81	1970-71	1980-81	1970-71	1980-81	Enrollment	Schools
Total 50 States and D.C.	45,909	40,984	90,821	86,198	506	475	-10.7	- 5.1
Alabama	805	759	1,514	1,465	532	518	- 5.7	- 3.2
Alaska	80	87	315	433	254	200	8.8	37.5
Arizona	440	514	733	940	600	547	16.8	28.2
Arkansas	463	448	1,335	1,188	347	377	- 3.2	-11.0
California	4,633	4,118	6,910	7,024	671	586	-11.1	1.7
Colorado	550	546	1,187	1,280	463	427	- .7	7.8
Connecticut	662	531	1,121	1,045	591	508	-19.8	- 6.8
Delaware	133	99	195	184	681	540	-25.6	- 5.6
District of Columbia	146	100	202	187	721	535	-31.5	- 7.4
Florida	1,428	1,510	1,829	2,084	781	725	5.7	13.9
Georgia	1,099	1,069	1,881	1,833	584	583	- 2.7	- 2.6
Hawaii	181	165	209	230	864	718	- 8.8	10.1
Idaho	182	203	573	550	318	370	11.5	- 4.0
Illinois	2,357	1,983	4,978	4,304	473	461	-15.9	-13.5
Indiana	1,231	1,056	2,180	2,079	565	508	-14.2	- 4.6
Iowa	660	534	1,986	1,793	332	298	-19.1	- 9.7
Kansas	512	415	2,031	1,541	252	270	-19.0	-24.1
Kentucky	717	670	1,610	1,407	446	476	- 6.6	-12.6
Louisiana	842	778	1,432	1,522	588	511	- 7.6	6.3
Maine	245	222	896	819	273	272	- 9.4	- 8.6
Maryland	916	751	1,306	1,322	702	568	-18.0	1.2
Massachusetts	1,168	1,022	2,411	2,264	484	451	-12.5	- 6.1
Michigan	2,181	1,863	3,862	3,837	565	486	-14.9	- .7
Minnesota	921	754	2,159	1,870	427	403	-18.1	-13.4
Mississippi	534	477	1,054	1,057	507	451	-10.7	.3
Missouri	1,039	845	2,341	2,189	444	386	-18.7	- 6.5
Montana	177	155	919	782	192	199	-12.4	-14.9
Nebraska	329	280	2,005	1,697	164	165	-14.9	-15.4
Nevada	128	149	237	276	538	542	16.4	16.5
New Hampshire	159	167	472	456	336	367	5.0	- 3.4
New Jersey	1,482	1,246	2,453	2,401	604	519	-15.9	- 2.1
New Mexico	281	[1]271	627	[1]619	449	438	- 3.6	- 1.3
New York	3,477	2,871	4,413	4,143	788	693	-17.4	- 6.1
North Carolina	1,192	1,129	2,027	2,032	588	556	- 5.3	.3
North Dakota	147	117	853	719	172	163	-20.4	-15.7
Ohio	2,426	1,957	4,259	3,958	570	495	-19.3	- 7.1
Oklahoma	627	578	2,011	1,895	312	305	- 7.8	- 5.8
Oregon	480	465	1,287	1,303	373	357	- 3.1	1.2
Pennsylvania	2,364	1,909	4,397	3,734	538	511	-19.3	-15.1
Rhode Island	188	148	381	324	494	458	-21.3	-15.0
South Carolina	638	619	1,186	1,153	538	537	- 3.0	- 2.8
South Dakota	166	129	1,355	751	123	171	-22.3	-44.6
Tennessee	900	854	1,815	1,741	496	490	- 5.1	- 4.1
Texas	2,840	2,900	5,238	5,522	542	525	2.1	5.4
Utah	304	344	555	637	548	539	13.2	14.8
Vermont	103	96	423	390	244	246	- 6.8	- 7.8
Virginia	1,079	1,010	1,794	1,794	601	563	- 6.4	.0
Washington	818	758	1,693	1,751	483	433	- 7.3	3.4
West Virginia	400	384	1,372	1,145	291	335	- 4.0	-16.6
Wisconsin	994	830	2,381	2,134	417	389	-16.5	-10.4
Wyoming	87	98	420	395	207	249	12.6	- 6.0

[1] Estimate based on 1979 data.

Source: U.S. Department of Education, National Center for Education Statistics, *Statistics of Public Schools, Fall 1970-71*, and unpublished tabulations.

Chart 2.3

Change in Public Elementary and Secondary Enrollment and Schools: 1970-71 to 1980-81


WA
OR
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ME
MA
CT
RI
NJ
DE
MD
DC
HI
Decrease in enrollment and schools
Decrease in enrollment, increase in schools
Decrease in schools, increase in enrollment
Increase in enrollment and schools

In the last decade, only 6 States had increases in both enrollment and the number of schools. Three States had increases in enrollment but no increase in the number of schools.

Table 2.4

Distribution of Public Elementary/Secondary Schools, by Enrollment Size and Type of School: 1970-71 and 1978-79

Enrollment Size of School	All Schools	Type[1] of School					
		Elementary	Middle/ Junior High	Senior High	All Other	Unclassified	Not Reported
1970-71				Number			
Total	89,372	47,434	9,771	15,144	14,170	2,223	630
			Percentage Distribution[2]				
Total	**100.0**	100.0	100.0	100.0	100.0	100.0	–
Fewer than 50 students	**6.4**	4.5	1.3	2.4	15.8	1.3	–
50 to 99 students	**6.0**	5.2	2.8	6.9	8.2	17.0	–
100 to 249 students	**19.0**	19.9	10.9	18.7	20.9	23.3	–
250 to 499 students	**29.0**	35.7	19.4	20.4	24.8	14.3	–
500 to 749 students	**20.8**	24.3	23.0	13.9	17.3	5.7	–
750 to 999 students	**9.2**	7.5	19.8	9.8	8.0	2.0	–
1,000 to 1,999 students	**8.2**	2.8	21.8	20.3	4.8	1.9	–
2,000 students or more	**1.4**	(3)	1.0	7.4	.3	.4	–
1978-79				Number			
Total	87,365	44,880	10,581	16,003	10,288	5,286	327
			Percentage Distribution[2]				
Total	**100.0**	100.0	100.0	100.0	100.0	100.0	–
Fewer than 50 students	**5.7**	2.9	.9	5.0	16.8	18.5	–
50 to 99 students	**5.2**	4.7	1.9	5.6	8.4	8.4	–
100 to 249 students	**18.8**	21.6	10.0	15.6	22.4	15.0	–
250 to 499 students	**34.4**	43.9	24.7	18.1	27.4	36.0	–
500 to 749 students	**19.5**	20.6	28.4	13.9	15.5	16.6	–
750 to 999 students	**7.7**	4.9	19.9	10.3	5.8	3.8	–
1,000 to 1,999 students	**7.4**	1.5	13.9	24.1	3.5	1.5	–
2,000 students or more	**1.4**	(3)	.3	7.3	.2	.1	–
1970-71 to 1978-79				Percent Change			
Total	**- 2.2**	**- 5.4**	**11.1**	**5.7**	**-27.4**	**137.8**	–
Fewer than 50 students	-12.8	-38.4	-28.7	123.5	-22.5	24.5	–
50 to 99 students	-15.6	-25.5	-14.3	- 25.4	17.2	- 15.7	–
100 to 249 students	- 3.0	2.2	.2	- 11.8	-22.2	53.8	–
250 to 499 students	16.0	16.3	37.8	- 6.2	-19.8	497.2	–
500 to 749 students	- 8.3	-19.9	33.4	5.4	-34.8	596.8	–
750 to 999 students	-17.2	-38.4	9.0	11.1	-47.4	361.4	–
1,000 to 1,999 students	-11.3	-49.1	-31.0	25.3	-48.0	88.1	–
2,000 students or more	- 5.0	-50.0	-71.4	29.3	-37.8	- .7	–

---

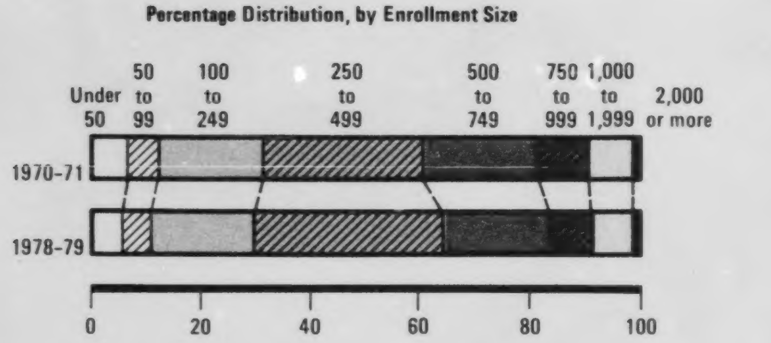
[1] Elementary: schools with grade span between prekindergarten and 6; middle/junior high: schools with grade span between 5 and 9; senior high: schools with grade span between 7 and 12; all other: schools with grade span other than those for elementary, middle/junior high, and senior high (includes schools with combined elementary and secondary grades); unclassified: schools with unspecified grade spans (includes schools for special education and handicapped).

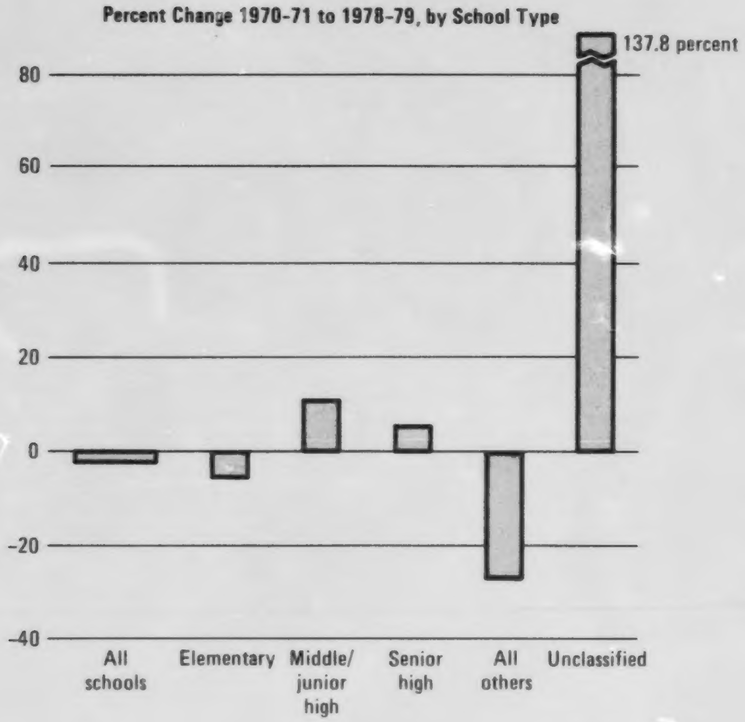
[2] Estimated using those reporting both grade span and enrollment; represents more than 99 percent of the schools in 1970-71 and 98 percent of the schools in 1978-79.

[3] Less than .05 percent.

Source: U.S. Education Department, National Center for Education Statistics, Common Core of Data School Universe Survey, unpublished tabulations.

Distribution and Percent Change of Public Elementary/Secondary Schools





During the 1970's, the number of schools decreased in all size categories except those with 250 to 499 students. Unclassified schools, which include schools for special education and the handicapped, more than doubled in number during that period.

Table 2.5

Private School Enrollment as a Percent of Total Elementary/Secondary School Enrollment, by Division[1]: 1960 to 1980, Selected Years

Division	Total Enrollment					Enrolled in Private Schools				
	1960[2]	1963	1970	1976	1980	1960[2]	1963	1970	1976	1980
	Number, in Thousands					Percent				
United States	43,201	48,448	51,047	[3]49,168	[3]46,013	13.3	13.0	10.1	[3]10.5	[3]10.9
New England	2,423	2,701	2,927	[3]2,989	[3]2,493	19.8	19.1	13.8	[3]10.8	[3]12.3
Middle Atlantic	7,615	8,501	8,832	7,838	7,251	21.8	21.6	17.2	17.1	16.9
South Atlantic	6,236	6,947	7,470	7,704	7,310	5.8	6.1	6.2	8.4	8.7
East South Central	2,946	3,134	3,176	3,065	3,016	5.5	5.8	6.9	8.7	8.5
West South Central	4,223	4,691	5,063	5,065	5,057	7.0	7.2	5.7	6.8	7.0
East North Central	8,876	10,019	10,522	9,787	8,798	21.1	20.8	12.7	11.8	12.6
West North Central	3,750	4,126	4,175	3,837	3,446	14.8	14.2	9.6	10.2	10.8
Mountain	1,839	2,095	2,255	2,399	2,404	7.5	7.1	4.7	5.2	5.1
Pacific	5,293	6,234	6,626	6,486	6,240	9.3	9.3	6.6	9.0	10.3

[1] Divisions defined by the U.S. Department of Commerce, Bureau of the Census. See Appendix, Definitions for the list of States comprising each division.

[2] Estimate based on enrollment in private elementary schools in 1960 and private secondary schools in 1961.

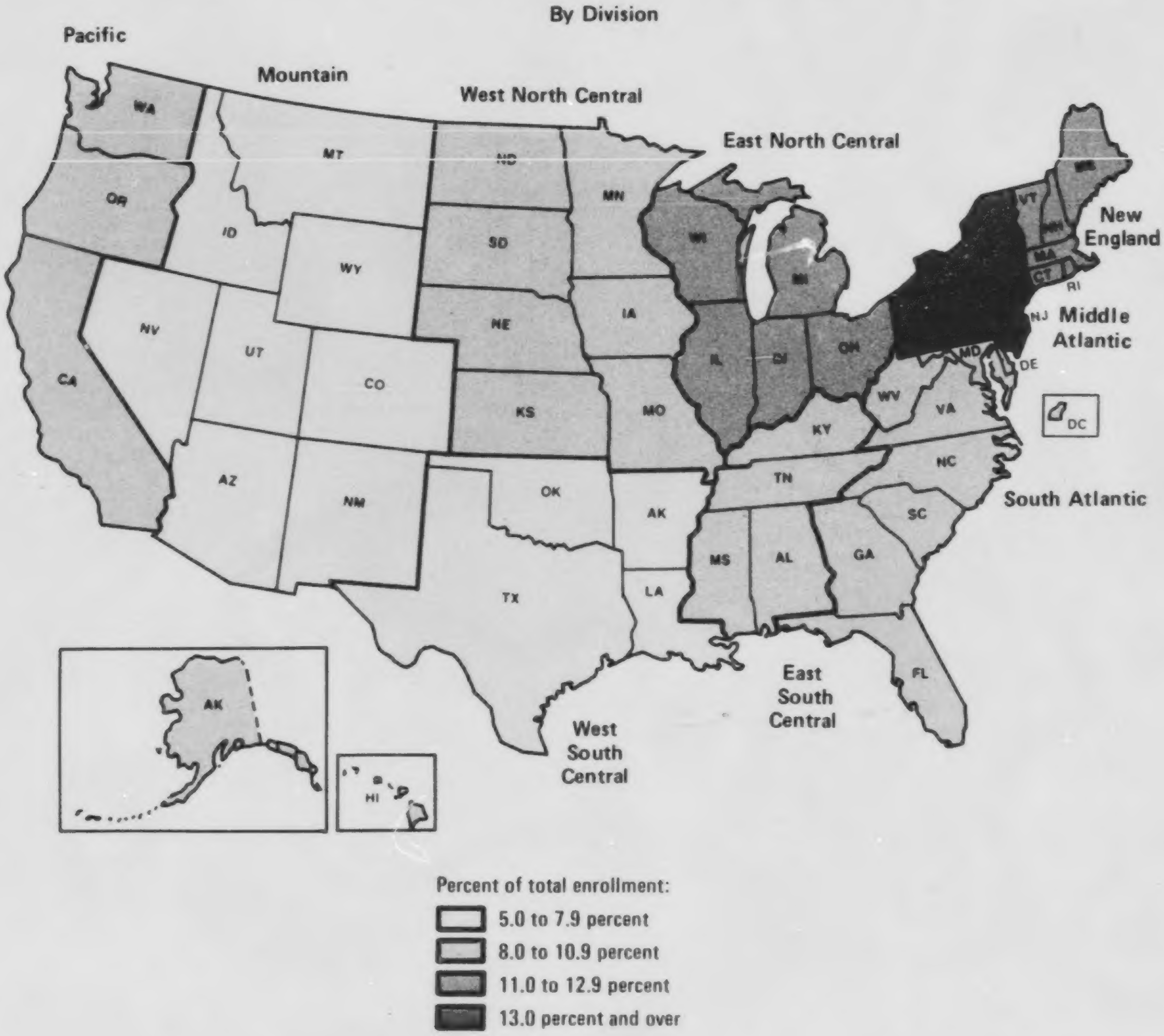
[3] Figures derived using estimate for private school enrollment in Massachusetts.

Note: Totals differ slightly from those reported in Table 2.1 for 1970 and 1976 because National estimates included estimates for nonreporting private schools while division estimates did not.

Source: U.S. Department of Health, Education, and Welfare, Office of Education, *Statistics of Nonpublic Elementary Schools, 1961-62, Statistics of Public and Nonpublic Elementary and Secondary Day Schools, 1968-69, Statistics of Public Schools, Fall 1970,* and unpublished tabulations from the U.S. Department of Education, National Center for Education Statistics, 1976 and 1980 Surveys of Private Schools.

Chart 2.5

Enrollment in Private Elementary and Secondary Schools, by Division: 1980


By Division
Pacific
Mountain
West North Central
East North Central
New England
Middle Atlantic
South Atlantic
East South Central
West South Central
WA
OR
CA
MT
ID
WY
NV
UT
CO
AZ
NM
ND
SD
MN
NE
IA
KS
MO
OK
AK
TX
LA
WI
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OH
KY
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AL
GA
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VA
WV
FL
VT
NH
ME
MA
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RI
NJ
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DE
DC
AK
HI
Percent of total enrollment:
5.0 to 7.9 percent
8.0 to 10.9 percent
11.0 to 12.9 percent
13.0 percent and over

The total porportion of students enrolled in private schools dropped between 1960 and 1970 and then increased slightly by 1980. Private school enrollment was highest in the Middle Atlantic division and lowest in the Mountain division in 1980.

Table 2.6

Total Enrollment Compared to Private Enrollment in Elementary/Secondary Schools, by Region and Metropolitan Status: 1970 to 1979, Selected Years

Region[1] and Metropolitan[2] Status	Total Enrolled in Grades 1 to 12				Private School Enrollment, Grades 1 to 12				Percent Enrolled in Private Schools			
	1970	1973	1977	1979	1970	1973	1977	1979	1970	1973	1977	1979
	Numbers, in Thousands								Percent			
Total, U.S..												
Metropolitan	30,261	31,351	29,495	28,435	4,109	3,726	3,689	3,506	13.6	11.9	12.5	12.3
Central city	12,494	13,156	11,344	11,106	2,049	1,932	1,888	1,774	16.4	14.7	16.6	16.0
Outside central city	17,767	18,195	18,151	17,329	2,060	1,794	1,801	1,732	11.6	9.9	9.9	10.0
Nonmetropolitan . .	18,036	15,094	15,109	14,546	992	707	800	725	5.5	4.7	5.3	5.0
Northeast:												
Metropolitan	8,206	8,142	7,695	7,476	1,656	1,424	1,192	1,061	20.2	17.5	15.5	14.2
Central city	3,257	3,262	2,913	2,894	844	798	620	588	25.9	24.5	21.3	20.3
Outside central city	4,949	4,880	4,782	4,582	812	626	572	473	16.3	12.8	12.0	10.3
Nonmetropolitan . .	2,625	2,318	2,357	2,259	203	118	181	160	7.7	5.1	7.7	7.1
North Central:												
Metropolitan	8,762	8,838	7,878	7,352	1,397	1,183	1,093	1,053	15.9	13.4	13.9	14.3
Central city	3,745	3,460	2,839	2,768	683	544	552	479	18.2	15.7	19.4	17.3
Outside central city	5,017	5,378	5,039	4,584	714	639	541	574	14.2	11.9	10.7	12.5
Nonmetropolitan . .	5,238	4,475	4,390	3,846	478	255	253	235	9.1	5.7	5.8	6.1
South:												
Metropolitan	7,348	8,106	7,765	7,887	613	706	838	847	8.3	8.7	10.8	10.7
Central city	3,264	3,854	3,419	3,450	308	376	450	429	9.5	9.8	13.2	12.4
Outside central city	4,084	4,252	4,346	4,437	305	330	388	418	7.5	7.8	8.9	9.4
Nonmetropolitan . .	7,736	6,433	6,557	6,595	249	276	277	279	3.2	4.3	4.2	4.2
West:												
Metropolitan	5,899	6,264	6,157	5,721	442	413	567	545	7.5	6.6	9.2	9.5
Central city	2,227	2,579	2,172	1,994	213	214	267	279	9.6	8.3	12.3	14.0
Outside central city	3,672	3,685	3,985	3,726	229	199	300	266	6.2	5.4	7.5	7.1
Nonmetropolitan . .	2,437	1,869	1,806	1,846	61	57	89	52	2.5	3.1	4.9	2.8

[1] Regions defined by the U.S. Department of Commerce, Bureau of the Census, See Appendix, Definitions, for the list of States comprising each region.

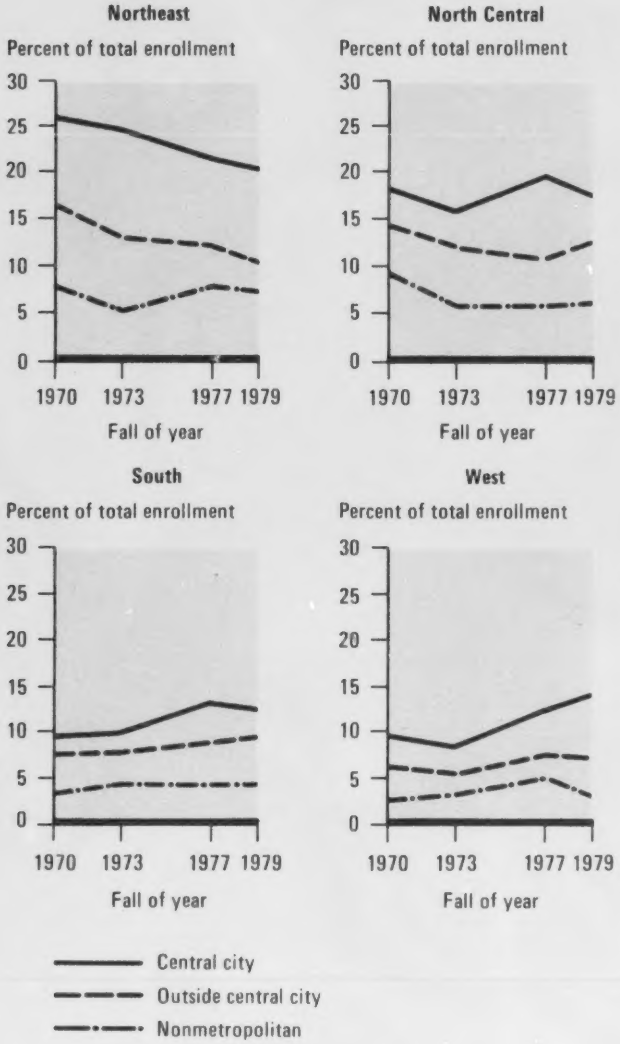
[2] Metropolitan areas for 1970 were those included in the 1960 Census. Additional counties were added to the standard metropolitan statistical areas in 1973, increasing the population of the metropolitan areas and decreasing the population of the other areas.

Note: Data in this table are from a sample survey of households while data showing enrollment elsewhere in this chapter are from a census of schools. Totals will differ slightly.

Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, unpublished tabulations.

Chart 2.6

Private School Enrollment, by Region and Metropolitan Status



Since 1970, private school enrollment has remained higher in central cities than in other areas. The Northeast region, while continuing to have the highest proportion of private school students, showed declines in metropolitan areas.

Table 2.7

Revenue Receipts of Public Elementary and Secondary Schools from Federal, State, and Local Sources: 1959-60 to 1978-79

School Year	Amount			
	Total	Federal	State	Local[1]
		In Millions		
1959-60	$14,747	$ 652	$ 5,768	$ 8,327
1961-62	17,528	761	6,789	9,978
1963-64	20,544	897	8,078	11,569
1965-66	23,357	1,997	9,920	13,440
1967-68	31,903	2,806	12,276	16,821
1969-70	40,267	3,220	16,063	20,985
1971-72	50,003	4,468	19,133	26,402
1973-74	58,231	4,930	24,113	29,187
1975-76	71,206	6,318	31,776	33,112
1977-78	81,440	7,699	35,006	38,736
1978-79	87,994	8,600	40,132	39,262
		Percentage Distribution		
1959-60	100.0	4.4	39.1	56.5
1961-62	100.0	4.3	38.7	56.9
1963-64	100.0	4.4	39.3	56.3
1965-66	100.0	7.9	39.1	53.0
1967-68	100.0	8.8	38.5	52.7
1969-70	100.0	8.0	39.9	52.1
1971-72	100.0	8.9	38.3	52.8
1973-74	100.0	8.5	41.4	50.1
1975-76	100.0	8.9	44.6	46.5
1977-78	100.0	9.5	43.0	47.6
1978-79	100.0	9.8	45.6	44.6

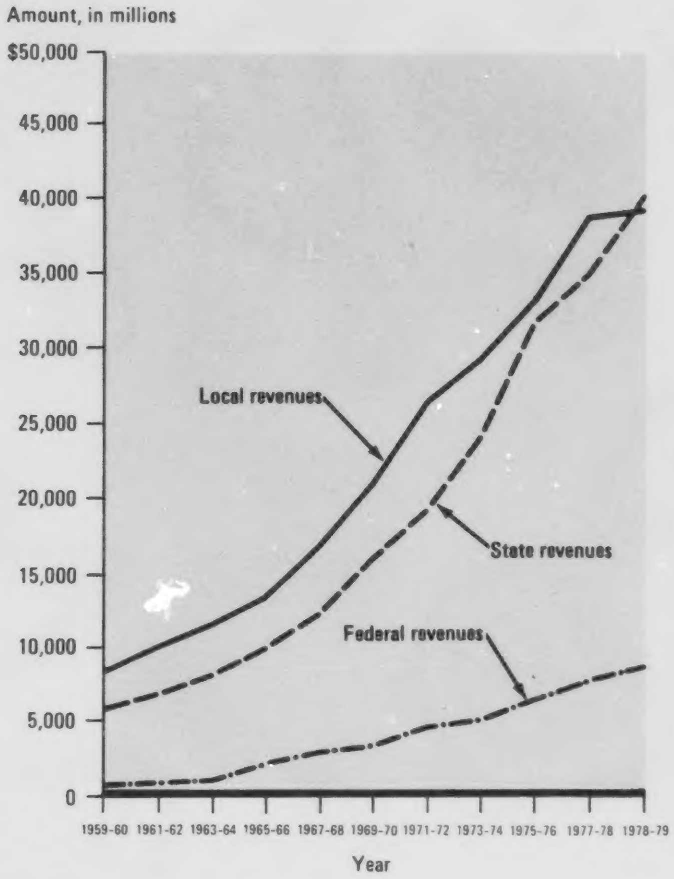
[1] Includes revenue receipts from local and intermediate sources, gifts, and tuition and fees from patrons.

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1981.*

Chart 2.7

Revenue Receipts of Public Elementary and Secondary Schools



In 1978-79, for the first time, revenues for public elementary and secondary schools from State sources exceeded revenues from local sources.

Table 2.8

Total Revenues and Title I[1] Revenues for Public Elementary/Secondary Education, by State: 1978-79

State	Total Revenue	Title I Revenue	Title I Revenue as a Percent of Total Revenue
	Amount, in Millions		Percent
Total 50 States and D.C.	$87,994.1	$2,620.3	2.98
Alabama	1,182.5	65.6	5.55
Alaska	374.8	6.6	1.75
Arizona	1,101.0	29.2	2.65
Arkansas	593.7	41.7	7.03
California	9,165.6	239.4	2.61
Colorado	1,356.7	25.6	1.89
Connecticut	1,149.0	24.3	2.12
Delaware	271.3	8.2	3.02
District of Columbia	283.7	16.6	5.85
Florida	2,918.4	102.6	3.52
Georgia	1,687.9	72.5	4.29
Hawaii	332.7	9.0	2.71
Idaho	303.3	8.5	2.80
Illinois	4,524.4	119.5	2.64
Indiana	1,978.9	36.6	1.85
Iowa	1,215.3	23.8	1.96
Kansas	931.5	20.7	2.22
Kentucky	984.2	54.1	5.49
Louisiana	1,361.1	77.6	5.70
Maine	397.4	12.1	3.04
Maryland	1,883.9	45.4	2.41
Massachusetts	2,933.1	60.4	2.06
Michigan	4,428.7	109.5	2.47
Minnesota	1,962.3	37.1	1.89
Mississippi	656.8	64.7	9.85
Missouri	1,610.7	47.0	2.92
Montana	361.2	9.4	2.62
Nebraska	607.6	14.2	2.33
Nevada	279.7	4.0	1.43
New Hampshire	289.2	4.7	1.61
New Jersey	3,431.1	70.7	2.06
New Mexico	556.4	22.9	4.12
New York	8,901.8	254.2	2.86
North Carolina	1,781.2	82.5	4.63
North Dakota	241.0	7.9	3.27
Ohio	3,764.6	82.2	2.18
Oklahoma	1,089.3	31.6	2.90
Oregon	1,119.7	28.6	2.56
Pennsylvania	4,807.6	123.2	2.56
Rhode Island	334.3	9.0	2.71
South Carolina	862.2	51.3	5.95
South Dakota	252.2	9.3	3.69
Tennessee	1,157.0	60.2	5.20
Texas	5,200.2	211.5	4.07
Utah	573.6	8.8	1.53
Vermont	199.2	5.4	2.73
Virginia	1,862.6	60.3	3.24
Washington	1,855.0	36.1	1.95
West Virginia	717.2	26.6	3.71
Wisconsin	1,947.2	43.1	2.21
Wyoming	214.1	4.3	1.99

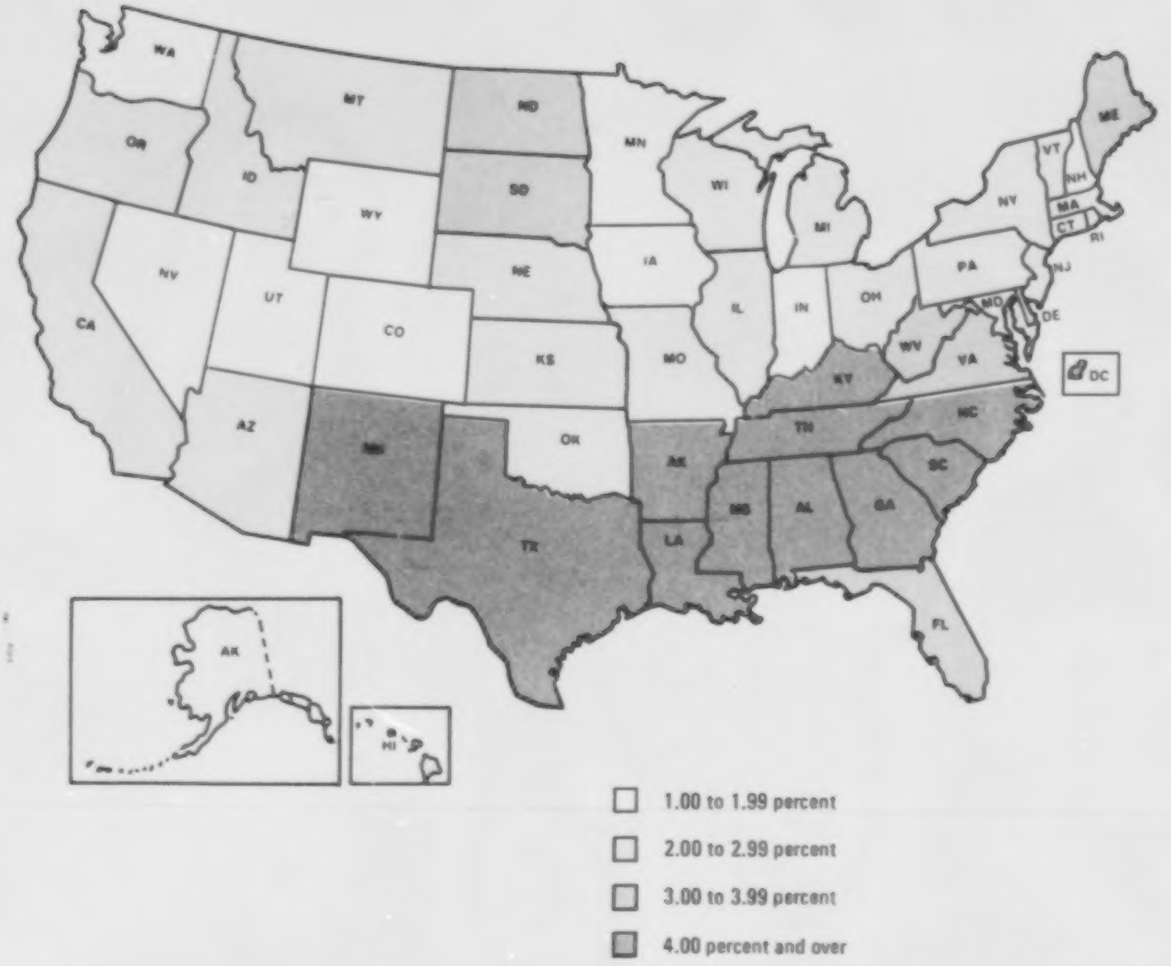
[1] Title I of the Elementary and Secondary Education Act of 1965 provides for financial assistance to local education agencies serving areas with concentrations of children from low-income families to expand and improve their educational programs which contribute particularly to meeting the special needs of educationally deprived children.

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Education, National Center for Education Statistics, unpublished tabulations from the Comman Core of Data Survey.

Chart 2.8

Title I Revenues as a Percent of Total Revenues by State


WA
MT
ND
MN
ME
OR
ID
SD
WI
VT
NH
NY
MA
CT
RI
WY
MI
NV
IA
PA
NJ
NE
UT
IL
IN
OH
CA
CO
MD
DE
KS
MO
WV
VA
DC
KY
AZ
NC
NM
OK
TN
AR
SC
MS
AL
GA
TX
LA
FL
AK
HI
1.00 to 1.99 percent
2.00 to 2.99 percent
3.00 to 3.99 percent
4.00 percent and over

States in the South receive larger proportions of their revenue from Title I for elementary and secondary education than do States in other regions.

Table 2.9

Expenditures for Public Elementary/Secondary Education Current Operations, by Major Function: 1959-60, 1969-70, and 1978-79

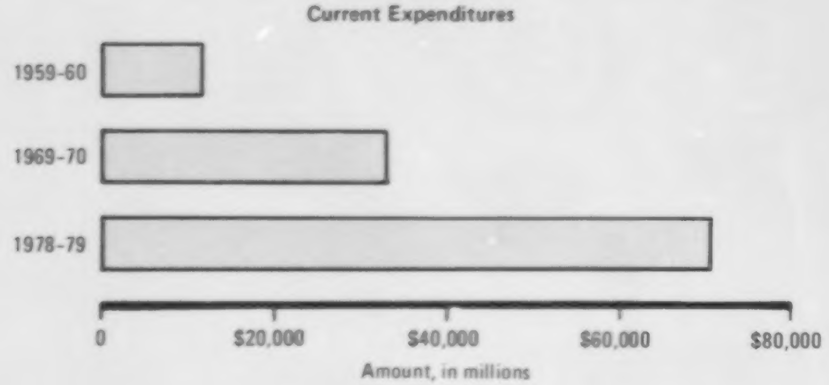
	1959-60	1969-70	1978-79
		In Millions	
Total[1]	**$11,765**	**$32,758**	**$70,558**
Local administration	382	1,149	3,144
Instruction	8,351	23,270	47,644
Attendance and health services	129	342	725
Pupil transportation	486	1,218	3,157
Operation and maintenance of plant	1,508	3,512	8,551
Fixed charges[2]	909	3,267	7,337
		Percentage Distribution	
Total[1]	100.0	100.0	100.0
Local administration	3.2	3.5	4.5
Instruction	71.0	71.0	67.5
Attendance and health services	1.1	1.0	1.0
Pupil transportation	4.1	3.7	4.5
Operation and maintenance of plant	12.8	10.7	12.1
Fixed charges[2]	7.7	10.0	10.4

[1] Excludes food services, student activities, and free summer school.

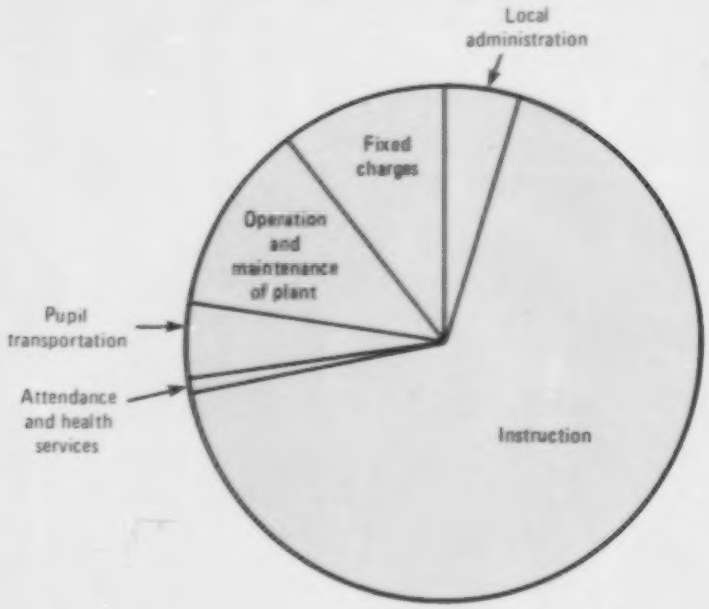
[2] Includes employer share of retirement, fringe benefits, rents, insurance premiums, and a variety of contractual services.

Source: U.S. Department of Education, National Center for Education Statistics, *Statistics of State School Systems, 1959-60, Statistics of State School Systems, 1969-70, Revenues and Expenditures for Public Elementary and Secondary Education, 1978-79.*

Current Expenditures for Public Elementary and Secondary Education


Current Expenditures

Distribution of Current Expenditures in 1978-79



Current expenditures for elementary and secondary education in 1978-79 were more than six times the amount in 1959-60 and more than double the 1969-70 expenditures. Two-thirds of expenditures is for instruction.

Table 2.10

Average Daily Attendance and Current Expenditures per Student: 1970-71 to 1979-80

Year	Average Daily Attendance (in millions)	Current Expenditures per Student	Current Expenditures per Student in Constant Dollars[1]
1970-71	42.4	$ 860	$1,680
1971-72	42.5	926	1,747
1972-73	42.2	1,020	1,850
1973-74	41.7	1,132	1,884
1974-75	41.5	1,294	1,939
1975-76	41.3	1,431	2,002
1976-77	40.8	1,561	2,065
1977-78	40.1	1,738	2,154
1978-79	39.1	1,919	2,174
1979-80	38.3	2,169	2,169
		Annual Percent Change	
1970-71 to 1971-72	0.2	7.7	4.0
1971-72 to 1972-73	– .7	10.2	5.9
1972-73 to 1973-74	-1.2	11.0	1.8
1973-74 to 1974-75	– .5	14.3	2.9
1974-75 to 1975-76	– .5	10.6	3.3
1975-76 to 1976-77	-1.2	9.1	3.2
1976-77 to 1977-78	-1.7	11.3	4.3
1977-78 to 1978-79	-2.5	10.4	1.2
1978-79 to 1979-80	-2.0	13.0	-.2

[1] Expenditure data adjusted to 1980 dollars using the U.S. Department of Commerce, Bureau of Labor Statistics Consumer Price Index.

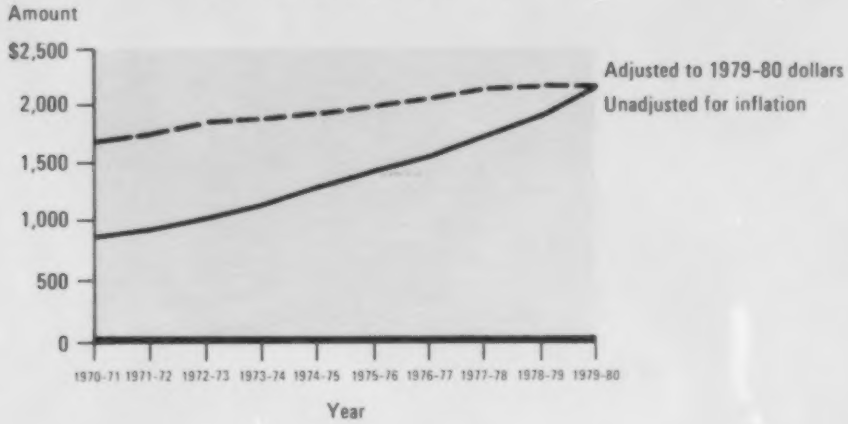
Note: Expenditure and average daily attendance data are those reported by the States for purposes of administering P.L. 89-10 and P.L. 81-874.

Source: U.S. Department of Education, National Center for Education Statistics, "Current Expenditures and Average Daily Attendance for Public Elementary and Secondary Education in the United States: 1970-71 Through 1979-80", forthcoming.

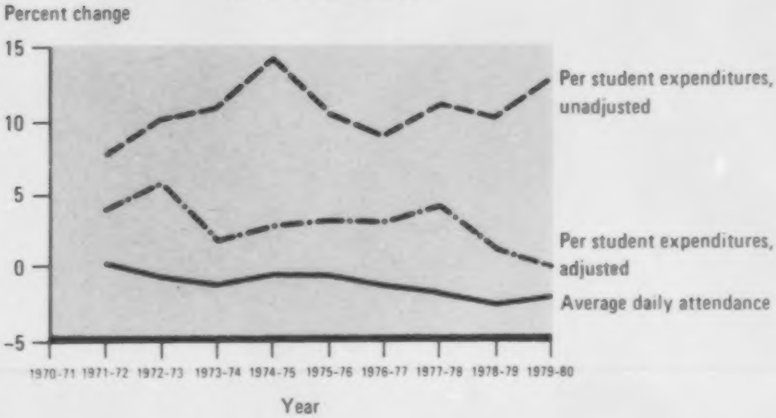
Chart 2.10

Average Daily Attendance and Current Expenditures per Student

Current Expenditures Per Student



Annual Percent Change



Even as average daily attendance declined during the 1970's, expenditures per student increased. But in 1979-80, for the first time, expenditures adjusted for inflation dropped slightly below the expenditures of the previous year.

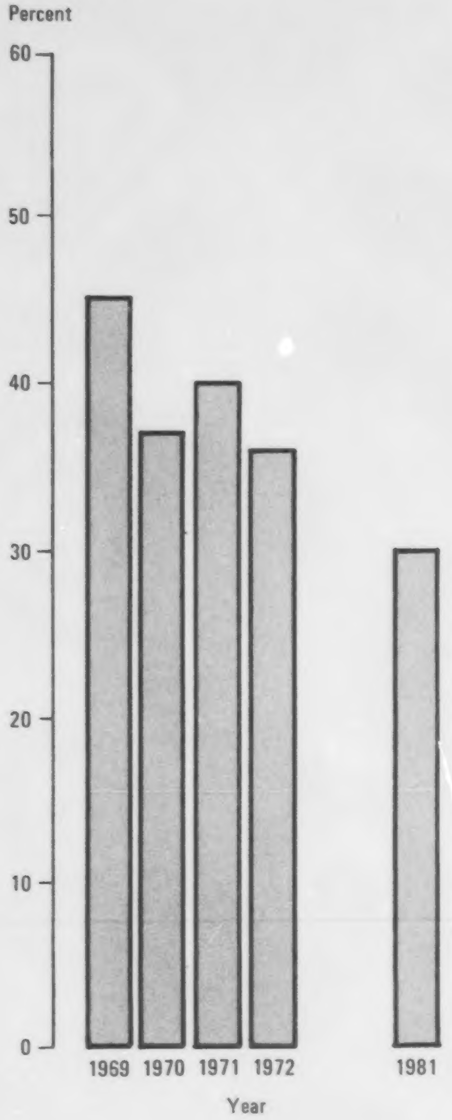
Table 2.11

Public Attitudes Toward Financial Support of Public Schools: 1969 to 1972 and 1981

	"Suppose the local public schools said they needed much more money . . . would you vote to raise taxes for this purpose . . . ?"		
Year and Type of Respondent	Favor Raising Taxes	Opposed to Raising Taxes	Don't Know
		Percentage distribution	
All respondents:			
1969	**45**	49	6
1970	**37**	56	7
1971	**40**	52	8
1972	**36**	56	8
1981, total	**30**	60	10
Type of respondent in 1981:			
No children in school	27	60	13
Public school parents	36	58	6
Nonpublic school parents	35	57	8

Source: Phi Delta Kappa, Inc., "The 13th Annual Gallup Poll of the Public's Attitudes Toward the Public Schools", *Phi Delta Kappan*, September 1981.

Percent of Public That Favors Raising Taxes for Public Schools



In 1981, the proportion of respondents who favored raising taxes for public schools was lower than in the early 1970's.

Table 2.12

Number of Civil Cases Involving Students, by Issue: 1977 through 1981

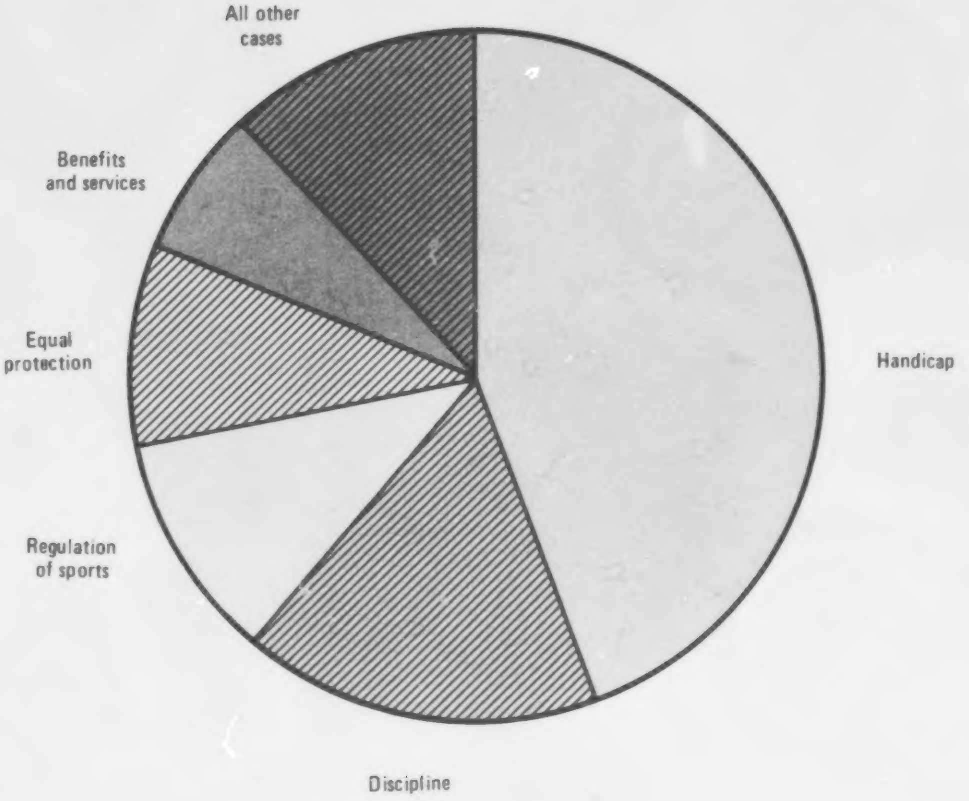
Issue	Number	Percent of Total Cases
Total	1734	100.0
Handicap	769	**44.3**
Placement outside public schools	352	20.3
Better programs	146	8.4
Other	271	15.6
Discipline	290	**16.7**
Suspension or explusion	77	4.4
Corporal punishment	30	1.7
Other	183	10.6
Regulation of sports	186	**10.7**
Equal protection	165	**9.5**
School segregation	53	3.1
Racial discrimination	35	2.0
Bilingual education	23	1.3
Sex discrimination	36	2.1
School finance	12	.7
Other	6	.3
Benefits and services from schools	121	**7.0**
Residency	54	3.1
Fees and tuitions	17	1.0
Food programs	5	.3
Other	45	2.6
Religion cases	73	**4.2**
Freedom of religion	22	1.3
Prayer cases	9	.5
Other	42	2.4
Freedom and privacy	65	**3.7**
Freedom of speech or press	22	1.3
School literature	13	.7
Dress and grooming	7	.4
Other	23	1.3
Academic matters	30	**1.7**
Competency testing	15	.9
Educational malpractice	10	.6
Right to diploma	5	.3
Other cases	35	**2.0**

Note: Details may not add to totals because of rounding.

Source: National Center for State Courts, *Student Litigation, A Compilation and Analysis of Civil Cases Involving Students, 1977 1981.*

Chart 2.12

Percentage Distribution of Civil Cases Involving Students



In the last 4 years more than two out of every five civil court cases involving students have been concerned with education for the handicapped.

Table 2.13

Special Programs Taken by High School Seniors, by Race/Ethnicity, Socioeconomic Status, and Region: 1980

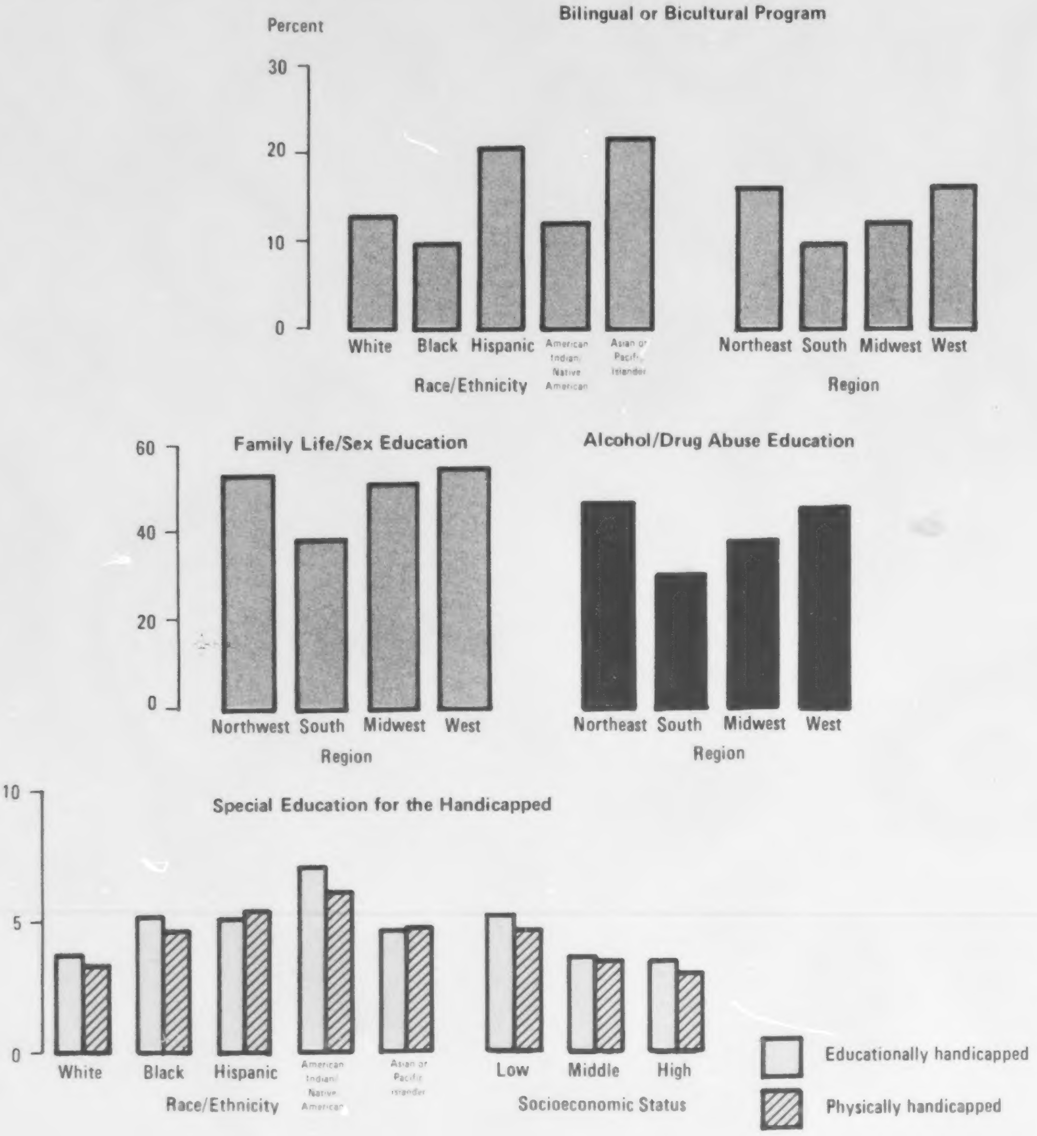
Item	Bilingual or Bicultural	Family Life or Sex Education	Alcohol or Drug Abuse Education	Special Education for the Educationally Handicapped	Special Education for the Physically Handicapped
			Percent		
All students	13.1	48.4	38.8	3.8	3.6
Race/ethnicity:					
White[1]	**12.7**	48.1	38.7	**3.7**	**3.3**
Black[1]	**9.6**	48.0	37.4	**5.2**	**4.6**
Hispanic	**20.5**	48.4	41.5	**5.1**	**5.4**
American Indian	**12.0**	46.4	37.6	**7.0**	**6.1**
Asian/Pacific Islander	**21.7**	55.2	44[illegible]	**4.6**	**4.7**
Socio-economic status:					
Low	10.6	47.8	37.6	**5.2**	**4.6**
Middle	12.2	48.1	38.7	**3.6**	**3.4**
High	17.8	49.2	40.8	**3.4**	**2.9**
Region:					
Northeast	**16.0**	**53.2**	**46.6**	3.2	2.9
South	**9.7**	**38.4**	**30.2**	4.1	3.6
Midwest	**12.1**	**50.9**	**37.7**	4.0	3.6
West	**16.3**	**54.8**	**45.3**	4.9	4.8

[1] Non-Hispanic.

Source: U.S. Department of Education, National Center for Education Statistics, unpublished tabulations from the High School and Beyond Survey.

Chart 2.13

Special Programs Taken by High School Seniors



The proportion of high school seniors taking special programs varied by race/ethnicity, socioeconomic status, and region. The largest differences were found in bilingual/bicultural programs that varied considerably by race/ethnicity.

Table 2.14

Discipline Problems in High Schools According to School Administrators' Perception of Seriousness: 1980

Discipline Problem	Seriousness of School Problems				
	Total	Serious	Moderate	Minor	Not at All
	Percentage Distribution				
Absenteeism	100.0	8.1	39.7	43.5	8.7
Student use of drugs or alcohol	100.0	5.6	36.5	50.5	7.4
Class cutting	100.0	4.7	25.6	51.6	18.1
Vandalism of school property	100.0	2.4	19.6	68.5	9.5
Robbery or theft	100.0	1.7	16.1	69.1	13.1
Verbal abuse of teachers	100.0	.1	8.3	62.8	28.8
Physical conflict among students	100.0	.1	5.8	62.6	31.5
Conflicts between students and teachers	100.0	0	5.2	69.5	25.3
Student possession of weapons	100.0	(1)	.5	21.1	78.4
Rape or attempted rape	100.0	0	.2	3.9	95.9

[1] Less than 0.05 percent.

Source: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Survey, "Discipline and Order in American High Schools", 1982.

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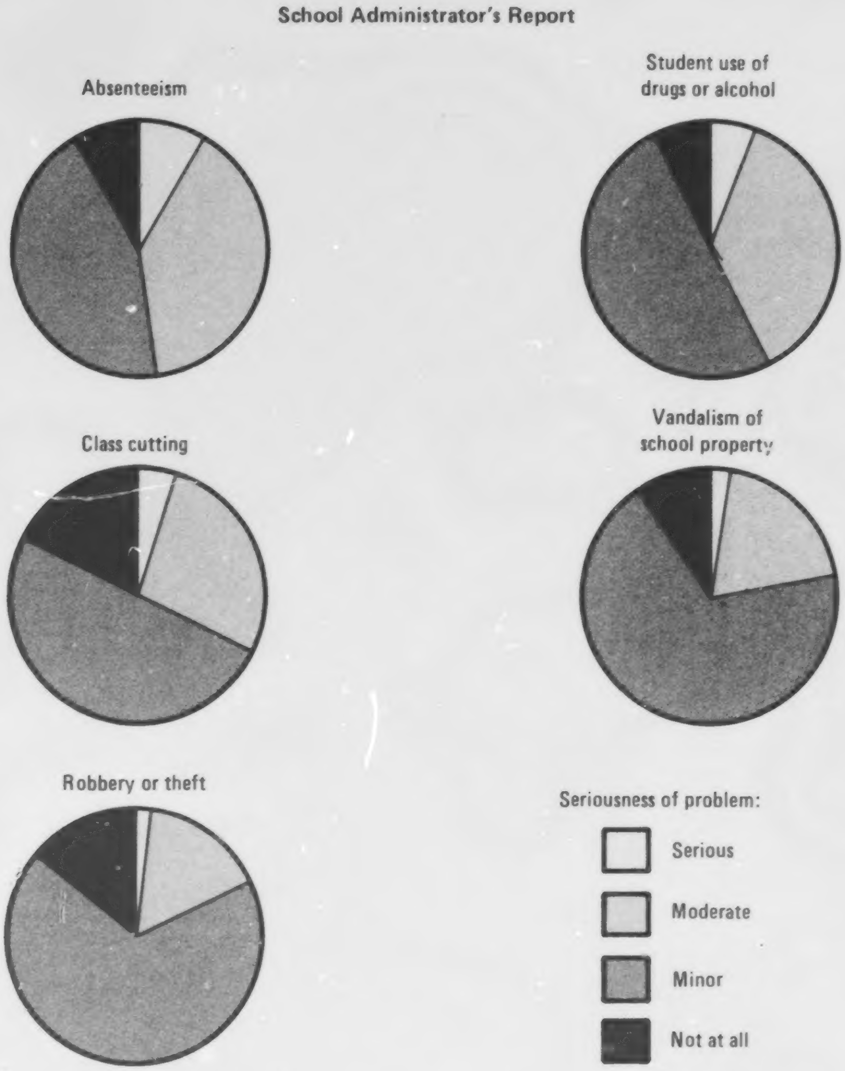
Chart 2.14

Discipline Problems in High School



Absenteeism was reported as a serious or moderate problem by nearly half the high school administrators.

Table 2.15

Percent of High School Sophomores in Schools that Bus Students for Racial Balance, by Division and Type of Community: 1980

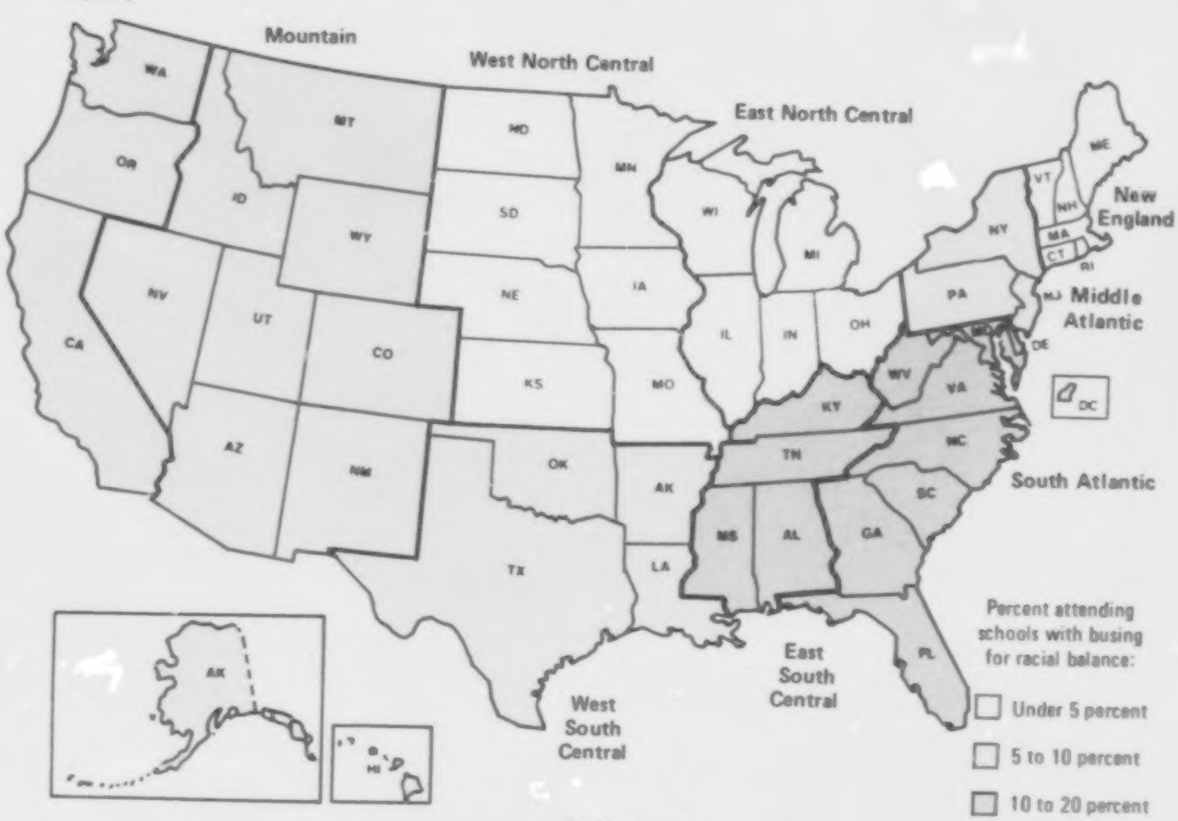
Division and Type of Community	All Schools	No Students Bused for Racial Balance	Some Students Bused for Racial Balance
	Percentage Distribution of Sophomores Attending		
United States	100.0	91.6	8.4
Division:			
New England	100.0	95.8	4.2
Middle Atlantic	100.0	93.5	6.5
South Atlantic	100.0	83.7	16.3
East South Central	100.0	85.4	14.6
West South Central	100.0	90.5	9.5
East North Central	100.0	95.4	4.6
West North Central	100.0	98.5	1.5
Mountain	100.0	91.7	8.3
Pacific	100.0	90.8	9.2
Type of community:			
Urban	100.0	75.3	24.7
Suburban	100.0	94.6	5.4
Rural	100.0	99.0	1.0

Source: U.S. Department of Education, National Center for Education Statistics, unpublished tabulations from the High School and Beyond Survey, 1980.

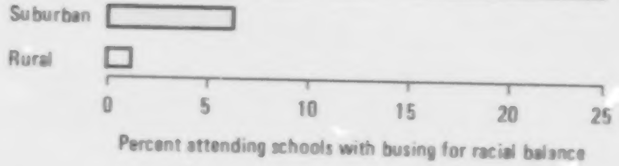
Chart 2.15

Percent of High School Sophomores in Schools That Bus Students for Racial Balance

By Division


Pacific
Mountain
West North Central
East North Central
New England
Middle Atlantic
South Atlantic
East South Central
West South Central
WA
OR
CA
ID
NV
MT
WY
UT
CO
AZ
NM
ND
SD
NE
KS
OK
TX
MN
IA
MO
AK
LA
WI
IL
MI
IN
OH
KY
TN
MS
AL
WV
VA
NC
SC
GA
FL
PA
NY
NJ
DE
DC
VT
NH
ME
MA
CT
RI
AK
HI
Percent attending schools with busing for racial balance:
☐ Under 5 percent
☐ 5 to 10 percent
☐ 10 to 20 percent

By Type of Community



In the South Atlantic and East South Central areas of the country, more than 10 percent of high school sophomores were bused for racial balance. In urban areas the proportion was nearly 25 percent.

Table 2.16

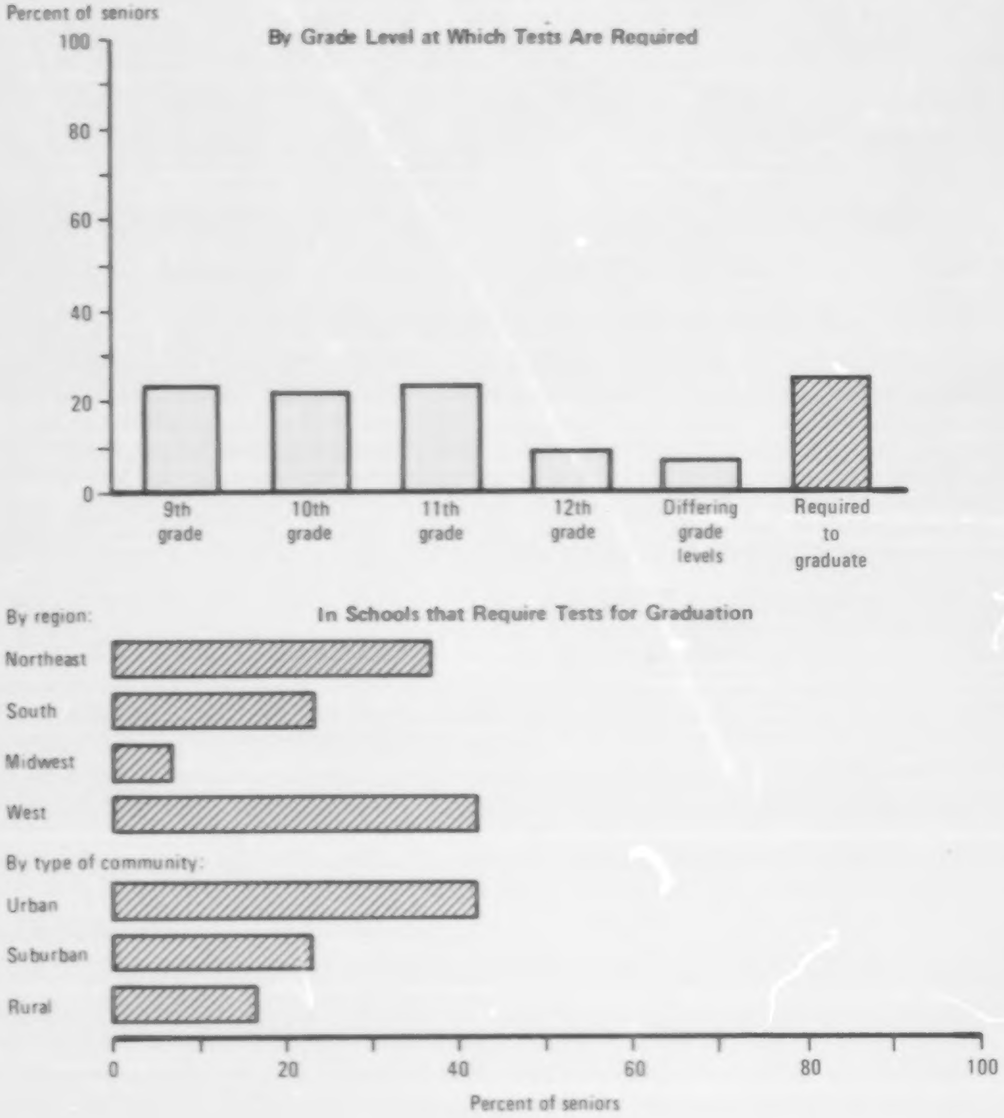
Percent of 1980 High School Seniors Attending Schools in Which Minimum Competency Tests Were Required, by Region, Type of Community and Grade Level Assessed: Spring 1980

Grade Level for Minimum Competency Test	Nation	Region				Type of Community		
		North-east	South	Mid-west	West	Urban	Suburban	Rural
9th grade	**23.5**	30.1	20.8	9.4	42.0	28.8	26.8	14.9
10th grade	**20.4**	16.5	14.2	14.3	45.1	38.4	18.5	12.1
11th grade	**23.7**	29.2	27.0	8.8	35.0	37.9	23.2	15.6
12th grade	**9.3**	12.6	5.6	5.6	17.3	22.3	7.5	4.2
At differing grade levels	**7.0**	15.7	3.2	1.9	10.3	8.5	5.9	7.7
Required to graduate	**24.9**	**36.4**	**23.4**	**6.6**	**42.3**	**42.2**	**23.2**	**16.5**

Source: U.S. Department of Education, National Center for Education Statistics, unpublished tabulations from the High School and Beyond Survey.

Chart 2.16

Percent of 1980 Seniors in Schools Requiring Minimum Competency Testing


By Grade Level at Which Tests Are Required

In Schools that Require Tests for Graduation

Nearly one-quarter of 1980 high school seniors attended schools that required passing a minimum competency test to graduate. The proportion was largest in the West and smallest in the Midwest. Students in urban communities were more likely than others to have such a requirement.

Table 2.17

Self-Reported Grades of High School Students, by Control of School: 1972 and 1980

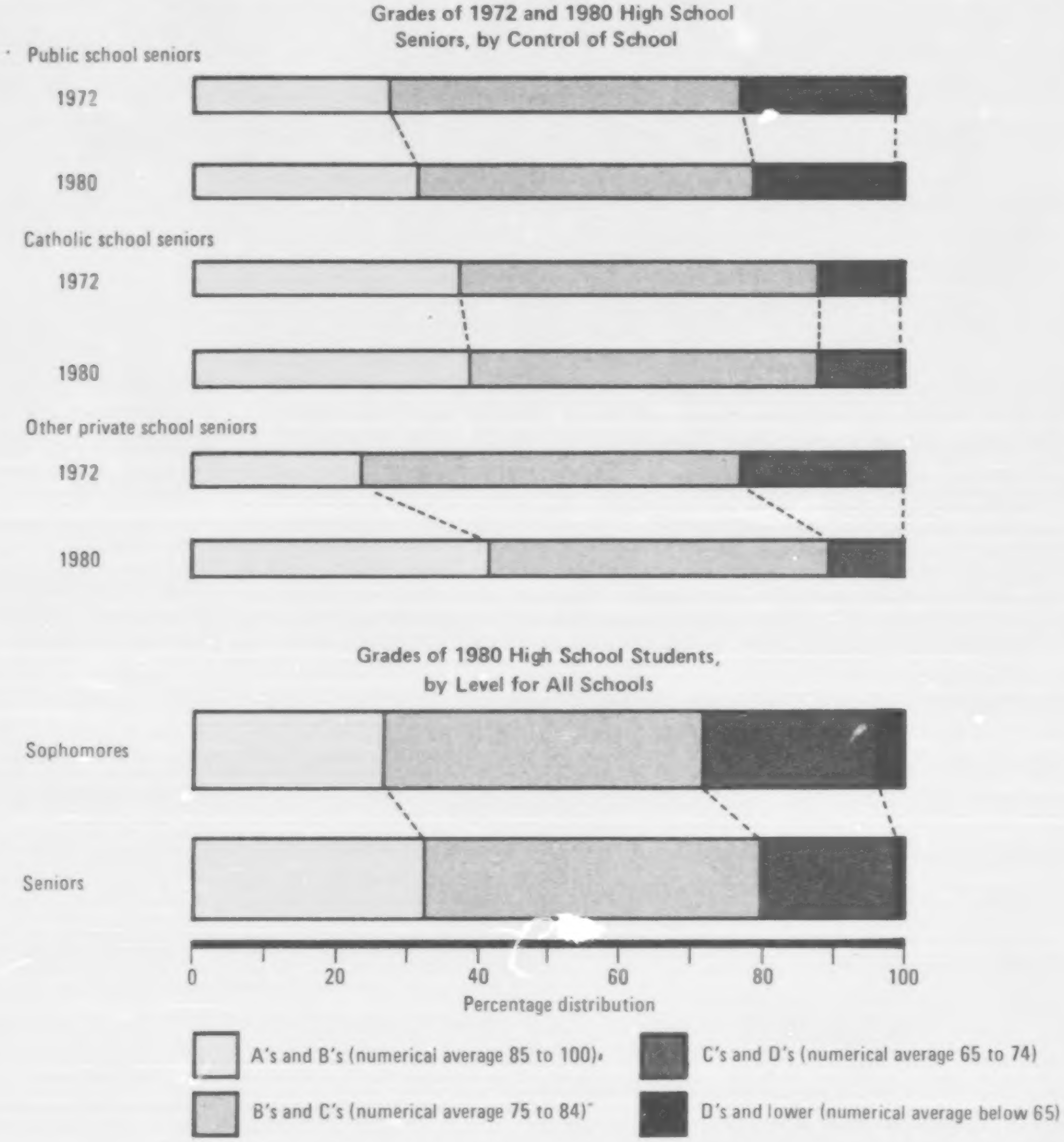
Self-Reported Grades	All Schools	Public Schools	Catholic Schools	Other Private Schools[1]
		Percentage Distribution		
1972 seniors	100.0	100.0	100.0	100.0
A's and B's (numerical average 85 to 100)	28.4	27.6	37.2	23.7
B's and C's (numerical average 75 to 84)	49.4	49.3	50.5	53.2
C's and D's (numerical average 65 to 74)	21.1	21.9	11.8	23.1
D's and lower (numerical average below 65)	1.2	1.2	.4	0
1980 seniors	100.0	100.0	100.0	100.0
A's and B's (numerical average 85 to 100)	32.5	31.7	38.6	41.6
B's and C's (numerical average 75 to 84)	47.2	47.0	49.2	47.7
C's and D's (numerical average 65 to 74)	19.2	20.1	11.9	10.5
D's and lower (numerical average below 65)	1.1	1.1	.3	.1
1980 sophomores	100.0	100.0	100.0	100.0
A's and B's (numerical average 85 to 100)	27.0	26.1	35.4	35.1
B's and C's (numerical average 75 to 84)	44.7	44.5	46.4	47.7
C's and D's (numerical average 65 to 74)	24.7	25.5	16.3	15.8
D's and lower (numerical average below 65)	3.7	3.9	1.8	1.4

[1] Because of the small school sample size, the heterogeneity of the schools, and the high non-response rate for schools in this sector, the estimates for other private schools are not nearly as accurate or as interpretable as those for public or Catholic schools.

Source: U.S. Department of Education, National Center for Education Statistics, National Longitudinal Study and High School and Beyond Survey, unpublished tabulations.

Chart 2.17

Self-Reported Grades of High School Students



Between 1972 and 1980, the proportions of high school seniors who said they made A's and B's increased in all types of schools. Sophomores' grades were relatively lower than seniors' grades in 1980.

Table 2.18

Remedial and Advanced Courses in English and Mathematics Taken by High School Sophomores and Seniors, by Race/Ethnicity, Sex, and Socio-Economic Status: 1980

Student Characteristic	Remedial		Advanced or Honors	
	English	Mathematics	English	Mathematics
		Percent		
All sophomores	34.1	34.2	22.9	24.2
Race/ethnicity:				
White[1]	34.6	33.5	22.7	24.4
Black[1]	32.5	37.0*	22.3	21.8*
Hispanic	35.5	39.1*	19.6*	19.9*
American Indian	44.2	45.4*	18.1	17.3
Asian/Pacific Islands	27.7	24.6*	36.4*	39.7*
Sex:				
Male	36.7	35.8	20.2	25.1
Female	34.1**	32.7**	25.4**	23.4**
Socio-economic status:				
Low	39.8***	41.0***	15.9***	18.0***
Middle	35.6	35.3	21.6	23.3
High	25.4***	24.9***	32.8***	32.6***
All seniors	30.8	30.0	26.9	23.0
Race/ethnicity:				
White[1]	30.8	29.3	27.0	23.4
Black[1]	31.3	34.3*	25.7	20.3*
Hispanic	33.1	37.5*	23.0*	18.0*
American Indian	39.7	41.9*	25.7	18.7
Asian/Pacific Islands	30.5	22.4*	34.3	41.9*
Sex:				
Male	33.8	31.7	24.3	25.5
Female	28.1**	28.5**	29.2**	20.8**
Socio-economic status:				
Low	38.2***	39.0***	18.3***	16.1***
Middle	32.1	30.9	25.6	22.3
High	21.3***	19.6***	38.7***	32.6***

*Represents significant difference from the white population at the .05 level.

**Represents significant difference from the male population at the .05 level.

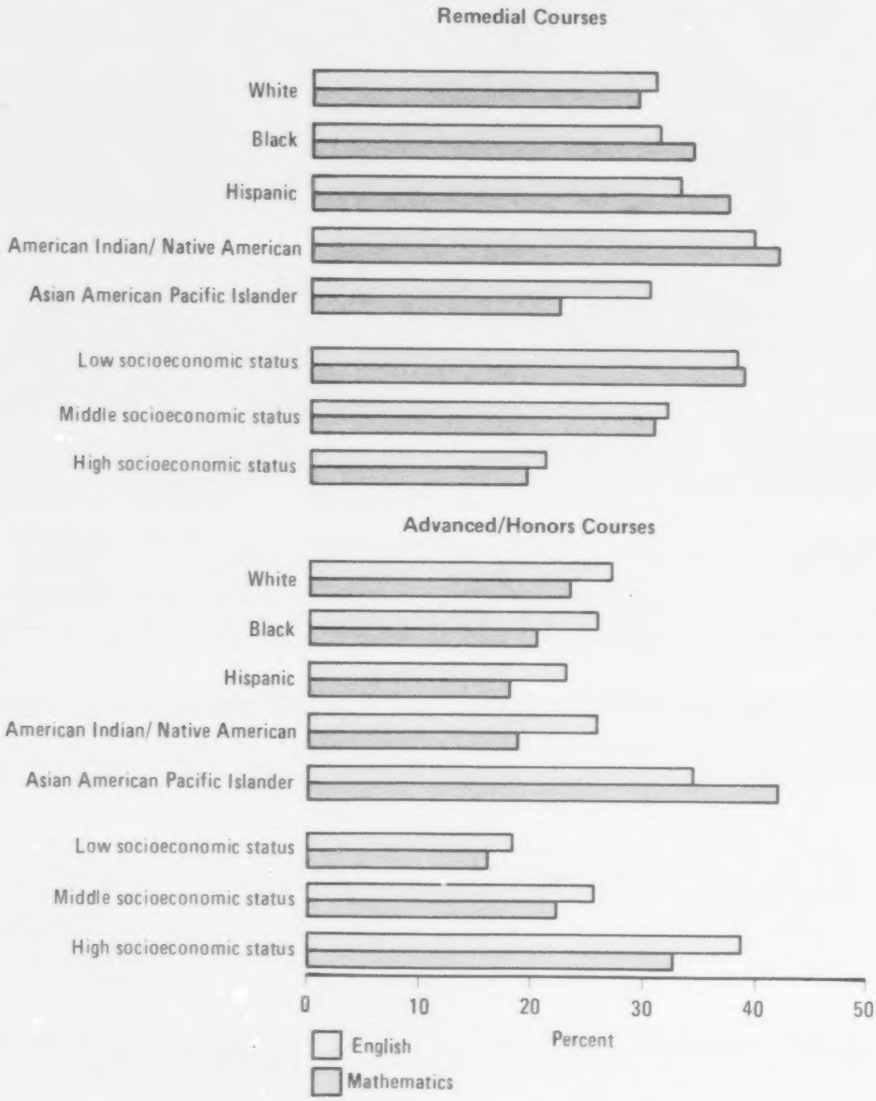
***Represents significant difference from the middle socio-economic status population at the .05 level.

[1] Non-Hispanic.

Source: U.S. Department of Education, National Center for Education Statistics, unpublished tabulation from the High School and Beyond Survey.

Chart 2.18

Remedial and Advanced Courses in English and Mathematics Taken by High School Seniors



Black, Hispanic, and American Indian seniors were significantly more likely than whites to have taken remedial mathematics courses, while Asian/Pacific Islanders were less likely to have taken such courses. The higher the socioeconomic background, the less likely a student had taken remedial courses and the more likely a student had taken advanced or honors courses.

Table 2.19

Attitudes of the Public Toward the Increase in Private Schools, and Toward Tax Support for Parochial Schools: 1981 with Comparisons to 1970

"In recent years the number of nonpublic schools, that is, private and church-related schools, has increased in many parts of the nation . . . In general, do you think this increase is a good thing or a bad thing for the nation?"

Type of Respondent	A Good Thing	A Bad Thing	No Opinion
		Percentage Distribution	
Total	**49**	30	21
No children in school	**49**	28	23
Public school parents	**44**	36	20
Private school parents	**63**	23	14

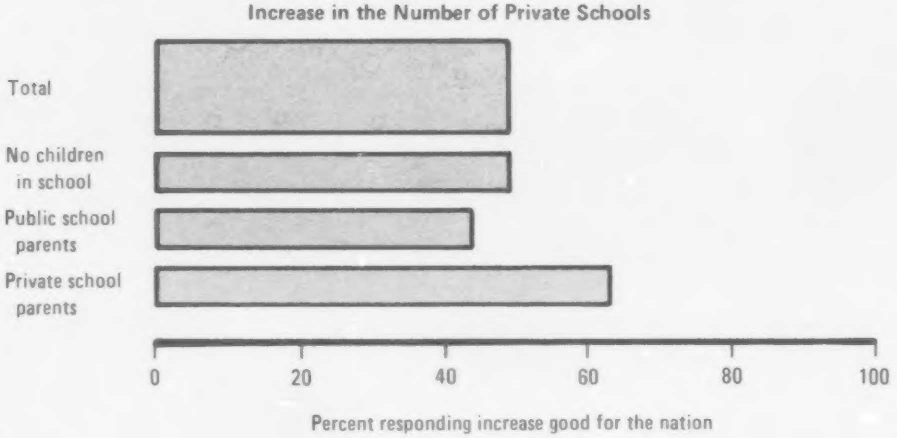
"It has been proposed that some government tax money be used to help parochial (church-related) schools make ends meet . . . Do you favor or oppose giving some government tax money to help parochial schools?"

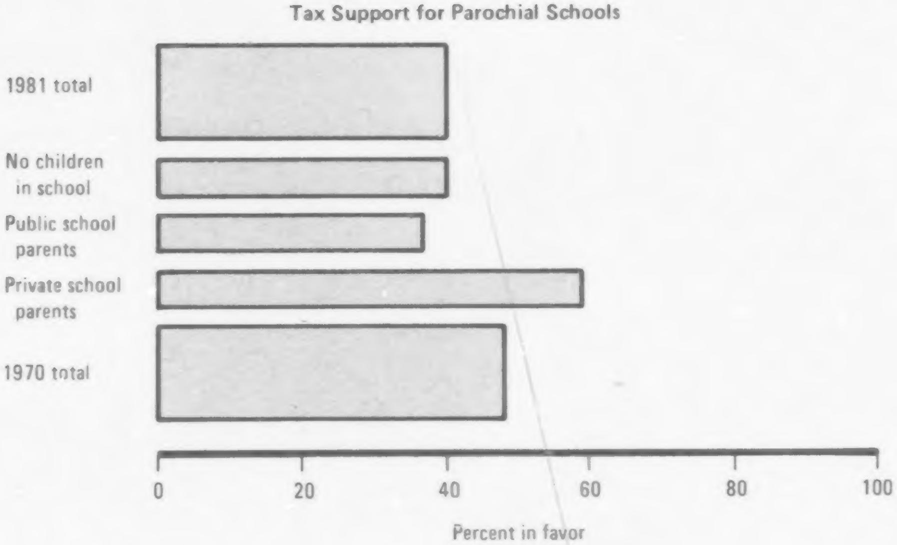
Type of Respondent	Favor	Oppose	No Opinion
		Percentage Distribution	
1981, total	**40**	51	9
No children in school	**40**	50	10
Public school parents	**37**	56	7
Private school parents	**59**	35	6
1970, total	**48**	44	8

Source: Phi Delta Kappa, Inc., "The 13th Annual Gallup Poll of the Public's Attitudes Toward the Public Schools", *Phi Delta Kappan*, September 1981.

Chart 2.19

Public Attitudes Toward the Increase in Private Schools and Toward Tax Support for Parochial Schools





Only among private school parents did the proportion of respondents favoring the increase in the number of private schools exceed 50 percent. The same was true among respondents favoring government support for parochial schools.

Table 2.20

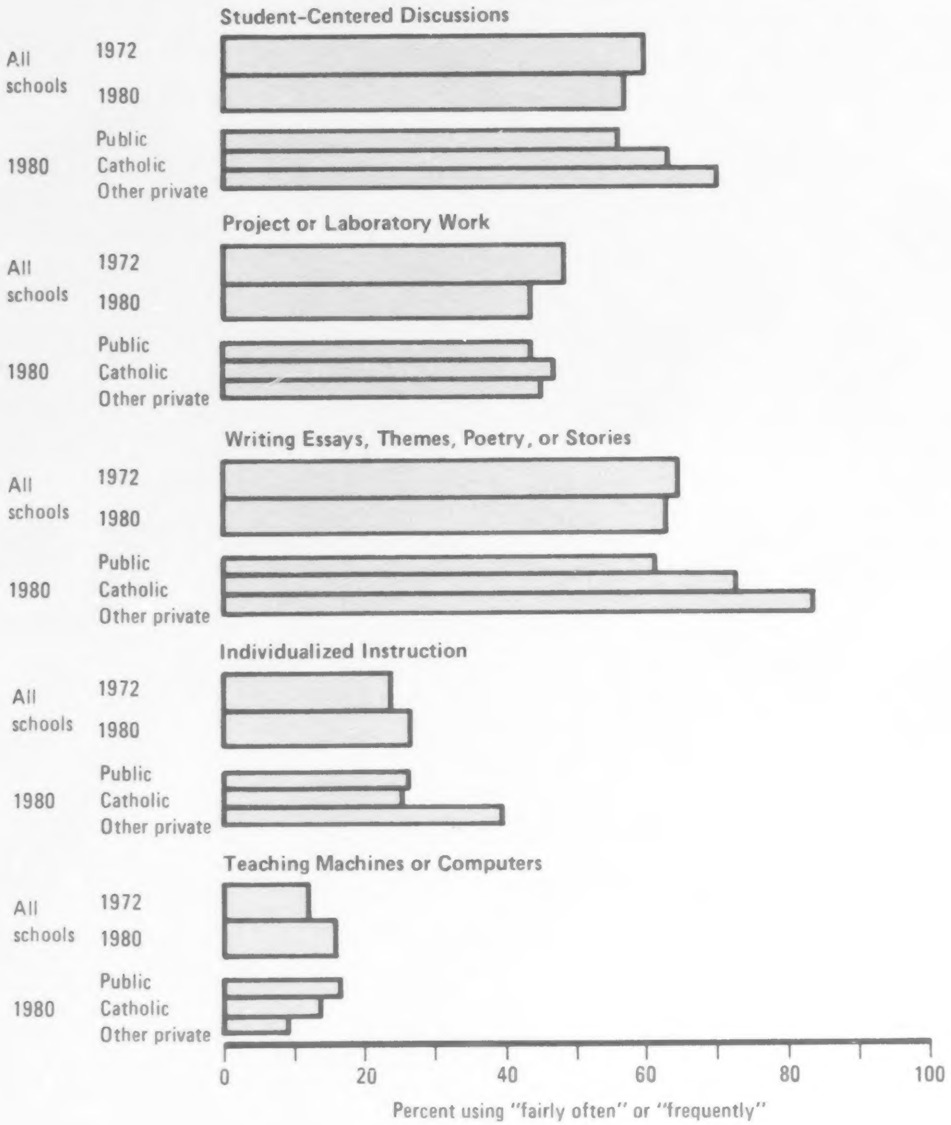
Teaching Methods Used in Courses Taken by High School Seniors, by Control of School: 1972 and 1980

Teaching Method	All Schools	Public Schools	Catholic Schools	Other Private Schools[1]
	Percent of Seniors Responding "Fairly Often" or "Frequently" Used in Courses			
1972 Seniors:				
Student-centered discussions	**59.8**	59.3	72.0	65.2
Project or laboratory work	**48.4**	48.0	52.5	42.3
Writing essays, themes, poetry or stories	**64.5**	63.9	68.9	88.5
Individualized Instruction	**23.9**	23.3	31.0	16.8
Teaching machines or computer-assisted instruction	**12.1**	12.0	13.0	5.0
1980 Seniors:				
Student-centered discussions	**56.7**	**55.8**	**63.0**	**70.2**
Project or laboratory work	**43.6**	**43.4**	**46.7**	**45.0**
Writing essays, themes, poetry or stories	**62.9**	**61.3**	**73.0**	**83.7**
Individualized instruction	**26.6**	**26.2**	**25.4**	**39.7**
Teaching machines or computer-assisted instruction	**16.0**	**16.4**	**13.8**	**8.9**

[1] Because of the small school sample size, the heterogeneity of the schools, and the high non-response rate for schools in this sector, the estimates for other private schools are not nearly as accurate or as interpretable as those for public or Catholic schools.

Source: U.S. Department of Education, National Center for Education Statistics, National Longitudinal Study and High School and Beyond Survey, unpublished tabulations.

Teaching Methods Used in Courses Taken by High School Seniors



Between 1972 and 1980, there was an increase in the proportion of students participating in classes where individualized instruction and teaching machines or computer-assisted instruction were likely to be used. In both years, lower proportions of students in public and Catholic schools than in other private schools said that student writing was likely to be used as a teaching method.

Chapter 3
Public Elementary/Secondary School Teachers

The decade of the 1970's was a time of change for elementary/secondary school teachers. New teachers entered a tight labor market and many candidates were unable to find jobs for which they had trained. Average salaries of teachers rose in nominal terms but fell in real terms. Test scores suggested that the academic ability of teachers was relatively low and declining further and States moved toward teacher competency testing. Teacher job satisfaction and morale declined significantly. A look at some of the available data from this period and into the 1980's provides a picture of the Nation's teaching force, identifies some of the more pertinent factors which affect teachers, and suggests which of these factors may present problems in the future.

Size and Composition of the Teaching Force

In 1980, approximately 3,157,000[1] elementary/secondary school teachers were employed, up from 2,479,000 in 1970, according to the Bureau of the Census Current Population Survey. The public schools reported a staff of 2,163,000 classroom teachers (1,175,000 elementary and 988,000 secondary) in the 1980-81 school year, up from 2,055,000 in 1970-71 (1,128,000 elementary and 927,000 secondary)[2]. Although the number of employed teachers changed substantially during the 1970's, the sex and racial/ethnic composition of the teaching force did not. The percentage of employed teachers who were female remained about 70 percent[3] and the percentage of full-time employed elementary/secondary teachers who were white remained between 85 and 90 percent.[4]

The age distribution of these teachers changed over time. The under 25-year-old age group represented about 17 percent of employed teachers in 1970 (entry 3.1). This proportion decreased to slightly more than 8 percent by 1980. The proportion of the total number of teachers in the 25- to 34-year-old group was about 28 percent in 1970, rose to 40 percent by 1976, and then remained essentially the same through 1980. In 1970 the age distributions of male and female teachers differed, but by 1980 these differences had largely disappeared. Approximately 25 percent of the women and 35 percent of the men in 1970 were 25 to 34 years old and about 20 percent of the women and 25 percent of the men were 35 to 44. By 1980 about 38 percent of both women and men were in the 25- to 34-year-old range; in the 35 to 44 year age range, the percentage for both women and men was about 25 percent.

The nationwide representation of minorities among full-time employed elementary and secondary teachers was between 10 and 15 percent during most of the 1970's. Across States, however, the pattern of percentages of minority full-time teachers in public elementary and secondary schools shows considerable variation. In 1979, minorities comprised less than 1 percent of full-time teachers in public elementary schools in Maine, Minnesota, New Hampshire, North Dakota, South Dakota, and Vermont and 25 percent or more in Alabama, Florida, Georgia, Louisiana, Maryland, Mississippi, New Mexico, South Carolina, and Texas (entry 3.2). In public secondary schools, the minority representation in the full-time teaching force was somewhat smaller than that in public elementary schools (entry 3.3).

Supply and Demand

The vigorous growth in demand for elementary and secondary school teachers in the 1950's and 1960's was moderated throughout the 1970's as elementary/secondary enrollment fell. From 1961 to 1970 the number of employed teachers grew by 37 percent, from 1,657,000 to 2,288,000. In comparison, from 1971 to 1980 the number of teachers employed by elementary/secondary schools grew by 7 percent, from 2,288,000 to 2,456,000. At the same time, the demand for additional teachers, those hired for new positions and replacement, decreased from 163,000 in 1971 to 131,000 in 1980, a drop of 20 percent[5]. In response to slackened demand, the number of bachelor's and master's degrees granted to education majors decreased by 16 percent, from 265,300 in 1971 to 221,600 in 1980 (entry 3.4). Demand for additional teachers, however, fell faster than the number of education majors graduated, and the pool of people with teaching degrees but not teaching grew in the mid-1970's.

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[1] Current Population Survey numbers are larger than NCES numbers because they include preprimary teachers, some adult education teachers, and otherwise unclassified teachers.

[2] U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics to 1990-91*, forthcoming.

[3] U.S. Department of Commerce, Bureau of the Census, unpublished tabulations.

[4] Equal Employment Opportunity Commission, Elementary-Secondary Staff Information (EEO-5), 1973-78.

[5] U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics to 1990-91*, forthcoming.

A survey of 1974-75 bachelor's degree recipients showed that in the spring of 1976, 105,000 of 229,500 newly qualified teaching candidates were not teaching.[6] A subsequent survey of 1976-77 bachelor's degree recipients showed that by spring of 1978, these numbers had declined; 71,000 out of 177,200 newly qualified teaching candidates were not teaching (entry 3.5). In the spring of 1978, 49 percent of the candidates were teaching full-time and another 11 percent were teaching part-time. Of those not teaching, a majority had not applied for teaching jobs.

The outlook for new teachers appears somewhat better by the end of the 1980's. The number of classroom teachers employed in public and private elementary/secondary schools is projected to increase moderately from 2,439,000 in 1980 to 2,642,000 in 1990, an increase of about 8 percent.[7] This increase is projected to occur almost entirely at the elementary school level. During the same decade, the college-age population is projected to decrease, possibly resulting in a smaller pool from which newly qualified teachers could be drawn. The effect of the decrease in the college-age population on the number of newly qualified teachers could be aggravated if the number of bachelor's degrees granted to newly qualified teaching candidates continued to decrease as it has recently. The estimated number of bachelor's recipients in education, from which approximately 75 percent of new teachers are drawn, rose from 176,600 in the 1970-71 school year to a high of 194,200 in 1972-73 and then began a steady decline to 118,100 by the 1979-80 school year (entry 3.4). Bachelor's recipients in education represented 21 percent of all bachelor's recipients in 1970-71, but by 1979-80, they represented slightly less than 13 percent of all bachelor's recipients. Among female recipients in 1971, 36 percent of bachelor's degrees were in education, but by 1980 this proportion had shrunk to 19 percent. For men, the proportions were 10 and 6 percent respectively.

In the spring of 1979, school districts reported 23,900 teacher layoffs, i.e. teachers whose contracts were not renewed because of budget constraints and whose positions were not subsequently filled (entry 3.6). This represented less than 1 percent of all teachers employed in the 1979-80 school year. School districts also reported 11,300 unfilled vacancies between the spring and fall of 1979. Shortages exceeded layoffs in four fields: bilingual education, industrial arts, physical sciences, and special education. Mathematics also had a higher proportion of shortages than expected from its share of the teaching force. Mathematics represented 6 percent of employed teachers but 8 percent of teacher shortages and 4 percent of all teacher layoffs. Conversely, primary and general elementary teachers represented 35 percent of employed teachers but only 23 percent of teacher shortages and 33 percent of all teacher layoffs. Some other fields in which layoffs were disproportionately high were art, social studies, and music.

State, regional, and local differences may be reflected in data on special education teachers. While special education teachers were in short supply (28 percent of all teacher shortages) in some areas, 12 percent of teachers laid off were special education teachers. This apparent anomaly indicates that not all States, regions, and localities of the country shared in the surpluses equally. Many areas in the Southwest continued to experience net in-migration while many areas in the Northeast continued to experience net out-migration. This generates different rates of change in enrollment and demand for teachers and different situations in regional and sub-regional teacher markets.

Both specialty and State differences are illustrated with the following data: in the spring of 1980, 30 States reported that their school districts had great difficulty in filling positions for mathematics teachers in secondary schools, 32 for special education teachers, 27 for industrial arts, 18 for natural and physical science teachers, and 18 for agriculture teachers. At the elementary level, 27 States reported that their school districts had great difficulty in filling positions for special education teachers.[8]

Status of Teachers

The likelihood of a teacher shortage emerging during the decade has increased the importance of teacher salaries, job satisfaction, and public support as incentives in attracting and retaining capable teachers. Expressed in 1980-81 dollars, the average salary of teachers in regular public elementary/secondary schools rose from $20,168 in the 1970-71 school year to $20,533 in 1972-73 before falling through the rest of the decade to $17,264 in 1980-81 (entry 3.7). This decline in the purchasing power of teachers' salaries is projected to continue for one more year as enrollment continues to decline and school funds remain tight. The latest NCES intermediate projections show a decrease in real salaries to $17,069 in 1981-82 before they begin to rise. By 1990-91, salaries are projected to reach $20,113 in terms of 1980-81 purchasing power, an improvement over 1980-81 but not quite up to the 1970-71 level.

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[6] U.S. Department of Education, National Center for Education Statistics, *New Teachers in the Job Market*, 1980.

[7] U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics to 1990-91*, forthcoming.

[8] National Education Association, *Teacher Supply and Demand in Public Schools, 1980-81*.

In 1980 the National Education Association's National Teacher Opinion Poll queried teachers on their job satisfaction. When asked about the impact of a number of issues, 66 percent reported that public attitudes toward school had a negative effect on their morale (entry 3.8). Other issues reported by large percentages of teachers as having a negative effect on morale were the treatment of education by the media (60 percent), student attitudes toward learning (60 percent), salary (58 percent), status of teachers in the community (52 percent), and student behavior (49 percent). There were few regional differences, although 70 percent of the teachers in the Southeast felt "salary" had a negative effect on morale as compared with 61 percent of teachers in the West, 52 percent in the Middle States, and 49 percent in the Northeast.

The percent of teachers responding that an item had a negative effect on morale increased with the increasing size of the school district for nearly all items. On the issue of class size, the percentages increased from 30 percent of teachers in school districts with enrollment size under 3,000 to 51 percent in school districts with enrollment of 25,000 and over. Other issues for which the percentages increased with the increasing size of school districts were treatment of education by the media (from 51 percent to 68 percent), and student behavior (from 44 percent to 57 percent).

By level, secondary school teachers were most likely to respond that certain conditions negatively affected job satisfaction. While 48 percent of elementary school teachers viewed student attitude toward learning as negative, 70 percent of junior high school teachers and 73 percent of senior high school teachers perceived it in that way. On the salary issue, 51 percent of teachers at the elementary level reported it as having a negative effect on morale, as did 63 percent of teachers at the junior high level and 65 percent of teachers at the senior high level.

Over time, the positive attitude of teachers toward their profession appears to have eroded, according to the National Education Association's Status of the American Public School Teacher Survey. Every 5 years since 1961, teachers have been asked whether they would choose to become a teacher if they could start over again. In 1961 and 1966, about half of the respondents indicated that they "certainly would," (entry 3.9). By 1981, this percentage had decreased to less than 22 percent, a drop of about 30 percentage points. There were also differences betwen women and men in their responses to this question. In 1961, nearly 57 percent of the women answered "certainly would" but in 1981 the percentage had dropped to approximately 25 percent, a decrease of about 32 percentage points. A smaller proportion of male teachers, approximately 35 percent, answered "certainly would" in 1961. This percentage had shrunk to 16 percent by 1981, a drop of about 20 percentage points.

The Gallup Poll 1981 survey of attitudes of Americans toward the public schools shows that the public rates their community's teachers about the same as it rates their community schools and principals and administrators. Thirty-nine percent gave the teachers a grade of A or B (entry 3.10). Thirty-six percent gave the schools a grade of A or B, and 36 percent gave the principals and administrators similar high marks. Teachers compared favorably with the ratings given to parents by the general public. Only 29 percent of the Nation's adults graded parents with A or B "for the job they are doing in raising their children to be self-disciplined and responsible young people." Since teachers and parents were evaluated in terms of their impact on children, these data may suggest that in the minds of the public, teachers are doing a better job than are parents in carrying out their respective responsibilities with children.

Academic Qualifications

Along with teachers' increasingly negative view of job conditions, are there any changes in the qualifications of people being attracted to and retained by the teaching profession? While there are no definitive answers to this question, available information suggests that on the average, those individuals who become teachers are less academically qualified than those who enter many other fields and that problems may exist in retaining the more academically capable teachers. Since 1973, college-bound seniors taking the Scholastic Aptitude Test (SAT) have been asked to choose from a list "—the field that would be your first choice for your college curriculum". Data show that the SAT scores in 1973 of intended education majors were lower than those of all college-bound seniors and by 1981, the gap in test performance had widened further. The SAT verbal mean score for college-bound seniors whose first choice was education declined from 418 in 1973 to 391 in 1981, a drop of 27 points, while the SAT verbal mean score for all college-bound seniors declined from 445 to 424, a drop of 21 points (entry 3.11). At the same time, the SAT math mean score for college-bound seniors whose first choice was education declined from 449 to 418, a drop of 31 points, while the SAT math mean for all college-bound seniors declined from 481 to 466, a drop of 15 points. A comparison of scores between college-bound seniors whose first choice was education and those whose first choice was not education would yield even greater differences.

NCES' National Longitudinal Study of the High School Class of 1972 provides evidence of the difference in academic capability between teachers and other college graduates. Comparisons among college graduates from the 1972 high school senior class show that the average SAT verbal score of those teaching kindergarten, elementary, or secondary classes in 1979 was 452 (entry 3.12). This compares with 493 for those employed in other professional, technical, and managerial jobs, 475 for those employed in nonprofessional occupations, and 514 for those not in the labor force. The average SAT math score for those teaching was 478 as compared with 537 for those employed in other professional, technical, and managerial jobs, 509 for those employed in nonprofessional jobs, and 546 for those not in the labor force. The NLS data also show that among 1972 high school graduates who were either education majors in college or were certified to teach, there was little difference in SAT average verbal scores between those teaching in 1979 and those employed in non-education related jobs, 449 compared to 453. However, the SAT average math score of 476 for those teaching was 16 points lower than the average math score of 492 for those in non-education-related occupations.

The possible problem of retaining the more academically capable teachers is pointed out in a recent study carried out by the University of North Carolina School of Education, in which the retention rates were examined for teachers entering the public education system in North Carolina from 1973 to 1980. Two major findings emerged from this study. One was that the overall academic ability of white females entering teaching, as measured by the National Teacher Examination (NTE), consistently declined over this period. The second was that teachers (males and females, but especially white females) who scored highest on measures of academic ability were most likely to leave their jobs early (whether or not they took other teaching jobs outside of North Carolina is not known).[9] Particularly, for white females who began teaching in North Carolina in 1973, the cumulative retention rate for the highest ability group as measured by the NTE was 37 percent by 1980 as compared with 62 percent for the lowest ranking group. While the above data are not conclusive and are applicable only to North Carolina, they raise concerns about the academic capability of those individuals who enter and remain in teaching jobs compared to those who enter and leave their jobs early.

One response to concerns about the academic quality of the Nation's teacher complement has been the introduction of competency-based teacher examinations as a requirement for certification. By 1981, 17 States had adopted provisions for competency-based teacher certification (entry 3.13). In 1981, 10 States had provisions in effect and by 1982, 3 more were expected to begin. More than half of those States had their own State-developed examination, all but one of the rest used the National Teacher Examination (NTE) and one State, South Carolina, used both NTE and a State-developed exam.

The decade of the 1970's saw a decline in enrollments at the elementary and secondary levels and an oversupply of teachers. Job satisfaction of teachers diminished, and salary declined in terms of real buying power. There is also some evidence that the academically better qualified students do not choose to become teachers. Furthermore, of those who do become teachers, the better academically qualified among them may leave their jobs sooner than the lesser qualified ones. In the mid-1980's, a projected increase in enrollments at the elementary level may stimulate demand for new teachers. If the number of newly qualified teachers continues to decline, a shortage of teachers in selected specialties and in particular geographic regions may develop in the middle and late 1980's. With increased demand may come greater incentives to teach, which may attract more qualified capable candidates and former teachers to the profession and may help retain those currently teaching. If, on the other hand, the availability and attractiveness of teaching jobs do not encourage more individuals to enter or remain in the field, the Nation could face a shortage of working teachers and consequent pressures to lower standards in an attempt to fill vacancies.

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[9] Schlecty P. and Vance V. "Do Academically Able Teachers Leave Education? The North Carolina Case." *Phi Delta Kappan*, Vol. 63, No. 2, Oct., 1981, pp. 106-12.

Table 3.1

Age Distribution of Employed Teachers: 1970 to 1980

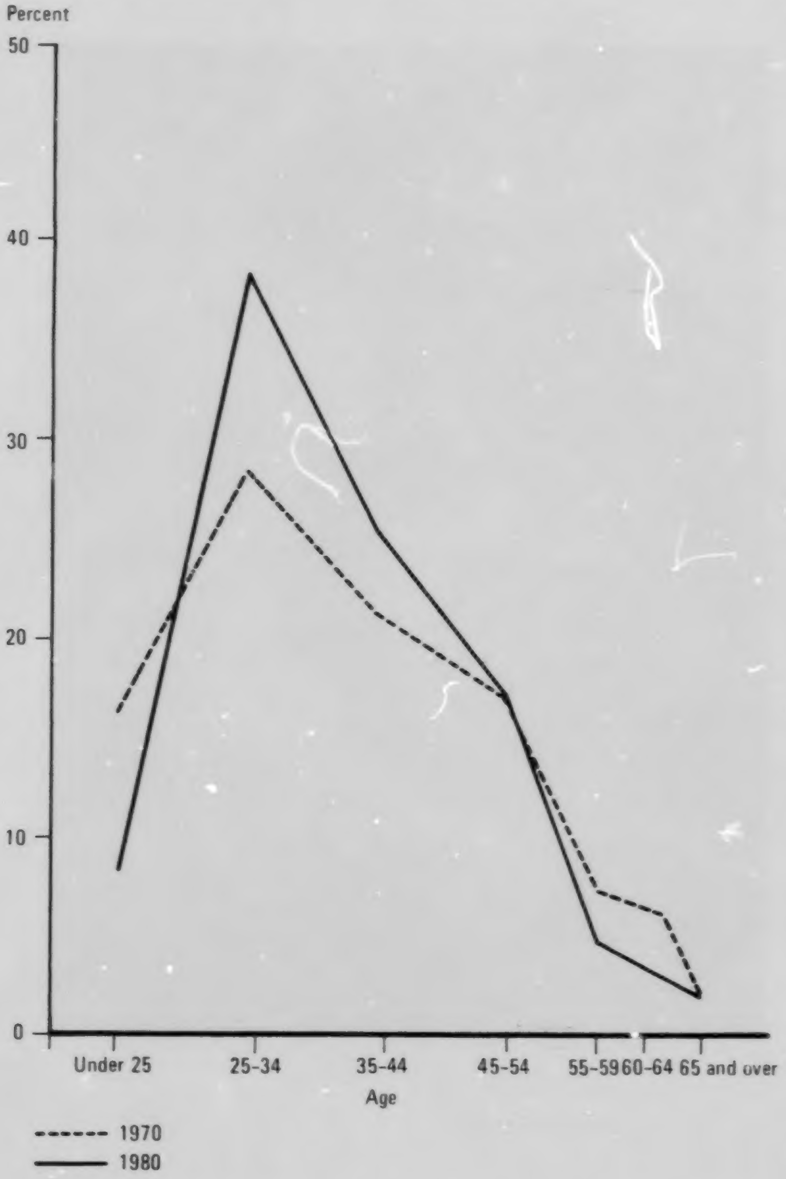
Year	Total Teachers, in Thousands	Age Group						
		Under 25	25 to 34	35 to 44	45 to 54	55 to 59	60 to 64	65 and Over
		Percentage Distribution						
All teachers:								
1970	2,479	**16.6**	**28.5**	**21.5**	**17.3**	**7.5**	**6.3**	**2.3**
1971	2,731	18.2	30.7	19.8	15.9	6.8	5.8	2.7
1972	2,841	17.3	33.5	20.5	15.7	6.1	4.6	2.4
1973	2,916	16.5	35.4	20.6	15.3	5.7	4.5	2.2
1974	2,957	14.7	38.4	20.7	15.7	5.0	3.6	2.0
1975	3,022	13.2	38.8	21.9	15.6	4.9	3.5	2.1
1976	3,099	11.8	40.0	21.5	15.8	5.5	3.3	2.1
1977	3,024	10.9	39.8	22.2	16.6	5.6	3.1	.9
1978	2,992	9.3	41.2	23.0	16.6	5.1	3.0	1.7
1979	3,118	9.0	40.0	24.2	16.5	5.2	3.3	1.8
1980	3,157	**8.3**	**38.3**	**25.7**	**17.6**	**4.9**	**3.1**	**2.1**
Male:								
1970	783	14.1	35.2	24.8	15.8	5.0	3.6	1.5
1971	800	16.8	39.2	21.0	14.6	4.0	3.0	1.5
1972	853	14.9	40.3	21.9	15.0	4.2	2.6	.9
1973	878	12.5	42.9	21.8	15.1	3.5	2.7	1.4
1974	908	10.1	44.6	22.8	15.6	3.3	2.1	1.4
1975	887	9.6	43.7	24.0	15.4	3.6	2.4	1.2
1976	901	9.1	45.0	22.5	14.9	5.0	2.2	1.2
1977	878	8.2	43.3	24.1	16.1	4.9	2.2	1.4
1978	868	7.7	44.2	24.3	16.1	4.5	1.7	1.5
1979	911	7.4	42.3	24.7	17.1	4.4	2.6	1.5
1980	921	**7.1**	**39.5**	**25.2**	**19.3**	**4.6**	**2.9**	**1.5**
Female:								
1970	1,696	17.7	25.4	19.9	18.1	8.7	7.5	2.8
1971	1,931	18.9	27.1	19.3	16.5	7.9	7.0	3.3
1972	1,981	18.3	30.5	19.8	16.0	6.8	5.5	2.9
1973	2,038	18.0	32.1	20.1	15.4	6.6	5.2	2.5
1974	2,049	16.8	35.6	19.7	15.7	5.7	4.2	2.2
1975	2,135	14.9	36.8	21.0	15.6	5.4	3.9	2.4
1976	2,198	12.8	38.1	21.1	16.2	5.7	3.7	2.5
1977	2,145	11.9	38.4	21.5	16.8	6.0	3.4	2.1
1978	2,124	10.0	39.9	22.5	16.8	5.4	3.6	1.8
1979	2,207	9.7	38.9	24.1	16.3	5.5	3.6	1.9
1980	2,236	8.8	37.8	25.8	16.9	5.1	3.2	2.3

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Labor, Bureau of Labor Statistics, unpublished tabulations.

Chart 3.1

Change in Age Distribution of Employed Teachers: 1970 and 1980



The proportion of teachers under the age of 25 dropped by half between 1970 and 1980, as did the proportion between 60 and 64 years old. At the same time, the proportion in the 25- to 34-year old age group rose from 28 percent to 38 percent.

Table 3.2

Racial/Ethnic Distribution of Full-time Teachers in Public Elementary Schools, by State: 1979

State	Total	White[1]	Minority				
			Total	Black[1]	Hispanic	American Asian[2]	American Indian[3]
			Percentage Distribution				
Total 50 States and D.C.	100.0	85.8	14.1	10.9	2.3	0.6	0.2
Alabama	100.0	70.2	**29.8**	29.8	(4)	(4)	(4)
Alaska	100.0	92.0	**8.0**	4.2	.5	1.0	2.3
Arizona	100.0	87.8	**12.2**	5.1	5.3	.7	1.2
Arkansas	100.0	82.1	**17.9**	17.7	(4)	.1	.1
California	100.0	82.2	**17.8**	7.2	5.8	4.3	.5
Colorado	100.0	92.3	**7.8**	2.7	4.0	.9	.1
Connecticut	100.0	94.4	**5.6**	4.0	1.5	.2	(4)
Delaware	100.0	80.7	**19.3**	18.3	.7	.2	.3
District of Columbia	100.0	–	–	–	–	–	–
Florida	100.0	75.1	**25.0**	21.9	3.0	(4)	.1
Georgia	100.0	73.3	**26.7**	26.4	.1	.1	(4)
Hawaii	100.0	–	–	–	–	–	–
Idaho	100.0	98.8	**1.3**	(4)	.5	.6	.1
Illinois	100.0	94.0	**5.9**	5.4	.4	.2	(4)
Indiana	100.0	91.9	**8.1**	7.7	.2	.1	(4)
Iowa	100.0	98.6	**1.4**	1.0	.2	.1	.2
Kansas	100.0	94.5	**5.5**	4.2	.7	.2	.3
Kentucky	100.0	95.2	**4.8**	4.7	(4)	(4)	(4)
Louisiana	100.0	63.7	**36.3**	36.0	.2	.1	(4)
Maine	100.0	99.8	**.1**	(4)	(4)	.1	(4)
Maryland	100.0	73.6	**26.4**	25.8	.2	.2	.1
Massachusetts	100.0	96.6	**3.5**	2.4	.8	.2	(4)
Michigan	100.0	87.5	**12.4**	11.6	.5	.2	.2
Minnesota	100.0	99.2	**.8**	.5	.1	.1	.1
Mississippi	100.0	58.4	**41.6**	41.5	(4)	.1	(4)
Missouri	100.0	93.9	**6.2**	5.7	.1	.1	.2
Montana	100.0	98.0	**2.0**	.1	.4	.1	1.4
Nebraska	100.0	97.0	**3.0**	2.6	.3	.1	(4)
Nevada	100.0	89.8	**10.2**	6.9	1.9	1.0	.3
New Hampshire	100.0	99.6	**.5**	.2	.1	.1	(4)
New Jersey	100.0	–	–	–	–	–	–
New Mexico	100.0	68.9	**31.2**	1.8	27.4	.2	1.6
New York	100.0	88.9	**11.0**	7.6	3.0	.4	(4)
North Carolina	100.0	76.6	**23.4**	22.3	(4)	.1	1.0
North Dakota	100.0	99.3	**.8**	.2	(4)	.1	.3
Ohio	100.0	92.4	**7.6**	7.2	.1	.1	(4)
Oklahoma	100.0	87.1	**12.8**	7.5	.4	.1	4.9
Oregon	100.0	96.7	**3.3**	1.2	.6	1.0	.5
Pennsylvania	100.0	92.1	**7.8**	7.5	.2	.1	(4)
Rhode Island	100.0	98.5	**1.5**	1.3	.1	.1	(4)
South Carolina	100.0	73.2	**26.7**	26.6	(4)	.1	(4)
South Dakota	100.0	99.1	**.9**	.1	.1	.2	.5
Tennessee	100.0	83.2	**16.9**	16.8	(4)	(4)	(4)
Texas	100.0	75.0	**25.0**	12.0	12.8	.1	.1
Utah	100.0	96.9	**3.1**	.3	1.6	.9	.4
Vermont	100.0	99.8	**.2**	.1	(4)	.1	(4)
Virginia	100.0	79.3	**20.7**	20.4	.1	.1	(4)
Washington	100.0	94 4	**5.6**	2.0	.7	2.0	.8
West Virginia	100.0	97.3	**2.7**	2.6	(4)	.1	(4)
Wisconsin	100.0	96.2	**3.8**	3.2	.3	.2	.1
Wyoming	100.0	97.9	**2.2**	.3	1.3	.3	.3

– Not available.

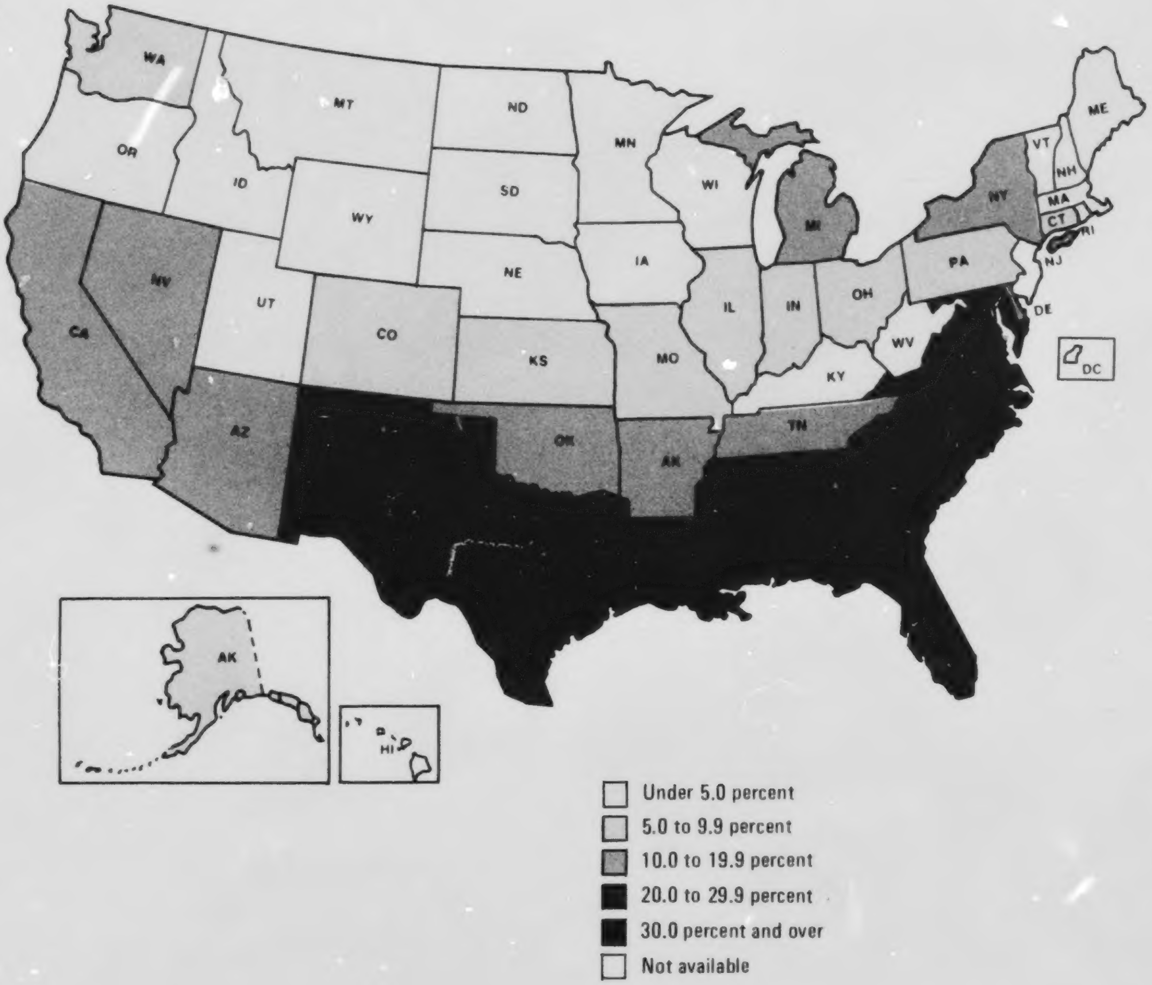
[1] Not of Hispanic origin.
[2] Includes Pacific Islanders.
[3] Includes Alaskan Natives.
[4] Less than 0.1 percent.

Note: Details may not add to totals because of rounding.

Source: Equal Employment Opportunity Commission, *Elementary-Secondary Staff Information (EEO-5)*, 1979.

Chart 3.2

Percent Minority Full-Time Teachers in Public Elementary Schools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Under 5.0 percent
5.0 to 9.9 percent
10.0 to 19.9 percent
20.0 to 29.9 percent
30.0 percent and over
Not available

Minorities had higher representation among full-time employed elementary school teachers in the South and lower representation in the New England and North Central States, generally reflecting their geographic distribution in the Nation.

Table 3.3

Racial/Ethnic Distribution of Full-time Teachers in Public Secondary Schools, by State: 1979

State	Total	White[1]	Minority				
			Total	Black[1]	Hispanic	American Asian[2]	American Indian[3]
	Percentage Distribution						
Total 50 States and D.C.	100.0	88.9	11.0	8.6	1.8	0.4	0.2
Alabama	100.0	75.4	**24.6**	24.4	.1	(4)	(4)
Alaska	100.0	93.2	**6.7**	3.1	1.2	.7	1.8
Arizona	100.0	91.7	**8.3**	2.0	5.4	.3	.6
Arkansas	100.0	84.9	**15.1**	14.9	.1	(4)	.1
California	100.0	85.0	**15.0**	5.9	5.3	3.0	.8
Colorado	100.0	94.1	**5.8**	2.1	3.1	.5	.1
Connecticut	100.0	96.3	**3.7**	2.7	[illegible]	(4)	(4)
Delaware	100.0	85.8	**14.2**	13.5	.4	.2	.2
District of Columbia	100.0	–	–	–	–	–	–
Florida	100.0	81.7	**18.4**	15.7	2.4	.2	.1
Georgia	100.0	71.5	**28.5**	28.0	.4	.1	(4)
Hawaii	100.0	–	–	–	–	–	–
Idaho	100.0	98.1	**1.9**	(4)	.8	.7	.3
Illinois	100.0	97.3	**2.8**	2.1	.5	.2	(4)
Indiana	100.0	95.2	**4.8**	4.1	.5	.1	(4)
Iowa	100.0	99.1	**.8**	.4	.3	.1	.1
Kansas	100.0	95.7	**4.3**	2.8	1.0	.2	.3
Kentucky	100.0	94.6	**5.5**	5.3	(4)	.1	(4)
Louisiana	100.0	65.7	**34.3**	34.0	.3	(4)	(4)
Maine	100.0	99.6	**.3**	.2	.2	(4)	(4)
Maryland	100.0	80.3	**19.7**	19.0	.3	.2	.2
Massachusetts	100.0	96.7	**3.3**	2.3	.6	.2	(4)
Michigan	100.0	90.2	**9.9**	9.1	.4	.2	.1
Minnesota	100.0	99.3	**.7**	.3	.2	.2	.1
Mississippi	100.0	64.4	**35.7**	35.4	.1	.1	(4)
Missouri	100.0	92.9	**7.1**	6.4	.4	.2	.1
Montana	100.0	97.5	**2.5**	(4)	.3	.1	2.1
Nebraska	100.0	97.7	**2.3**	1.6	.5	.1	(4)
Nevada	100.0	90.5	**9.5**	5.0	3.0	.9	.5
New Hampshire	100.0	99.6	**.4**	.2	.2	(4)	(4)
New Jersey	100.0	–	–	–	–	–	–
New Mexico	100.0	75.2	**24.8**	1.2	22.3	.3	1.1
New York	100.0	95.5	**4.6**	3.0	1.0	.3	.1
North Carolina	100.0	79.4	**20.7**	19.7	.3	(4)	.6
North Dakota	100.0	99.8	**.2**	(4)	(4)	(4)	(4)
Ohio	100.0	93.8	**6.2**	5.8	.2	.2	(4)
Oklahoma	100.0	88.1	**11.9**	6.8	.5	.1	4.5
Oregon	100.0	97.3	**2.6**	.7	0.7	.8	.4
Pennsylvania	100.0	93.5	**6.5**	6.2	.3	.1	(4)
Rhode Island	100.0	98.6	**1.4**	1.0	.3	.1	(4)
South Carolina	100.0	74.4	**25.6**	25.5	.1	.1	(4)
South Dakota	100.0	99.5	**.6**	.1	.1	.1	.3
Tennessee	100.0	83.2	**16.8**	16.7	.1	(4)	(4)
Texas	100.0	81.3	**18.8**	10.2	8.3	.2	(4)
Utah	100.0	98.2	**1.8**	.2	.9	.6	.2
Vermont	100.0	99.6	**.4**	.2	.1	.1	(4)
Virginia	100.0	82.5	**17.6**	17.2	.3	.2	(4)
Washington	100.0	95.5	**4.6**	1.5	.9	1.4	.8
West Virginia	100.0	96.7	**3.3**	3.1	.1	(4)	(4)
Wisconsin	100.0	97.0	**3.0**	2.4	.3	.2	(4)
Wyoming	100.0	97.4	**2.6**	.3	1.4	.5	.3

– Not available.

[1] Not of Hispanic origin.

[2] Includes Pacific Islanders.

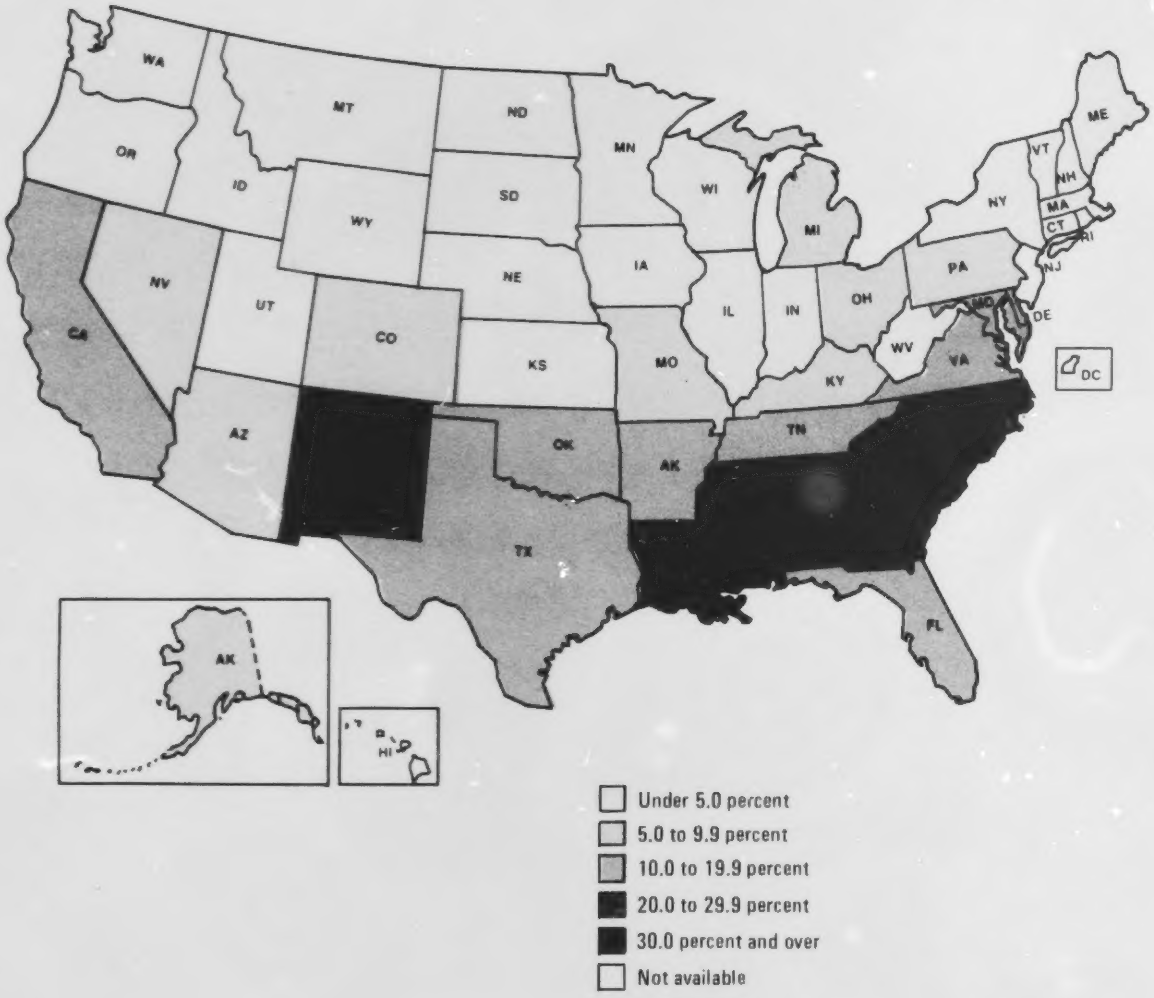
[3] Includes Alaskan Natives.

[4] Less than 0.1 percent.

Note: Details may not add to totals because of rounding.

Source: Equal Employment Opportunity Commission, *Elementary-Secondary Staff Information (EEO-5)*, 1979.

Percent Minority Full-Time Teachers in Public Secondary Schools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NM
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AK
TX
LA
MS
AL
GA
SC
FL
AK
HI
DC
☐ Under 5.0 percent
☐ 5.0 to 9.9 percent
▨ 10.0 to 19.9 percent
■ 20.0 to 29.9 percent
■ 30.0 percent and over
☐ Not available

Across the States, minority representation among public secondary school teachers was somewhat smaller than that among public elementary school teachers but followed a similar distribution. The highest minority representation was in the South.

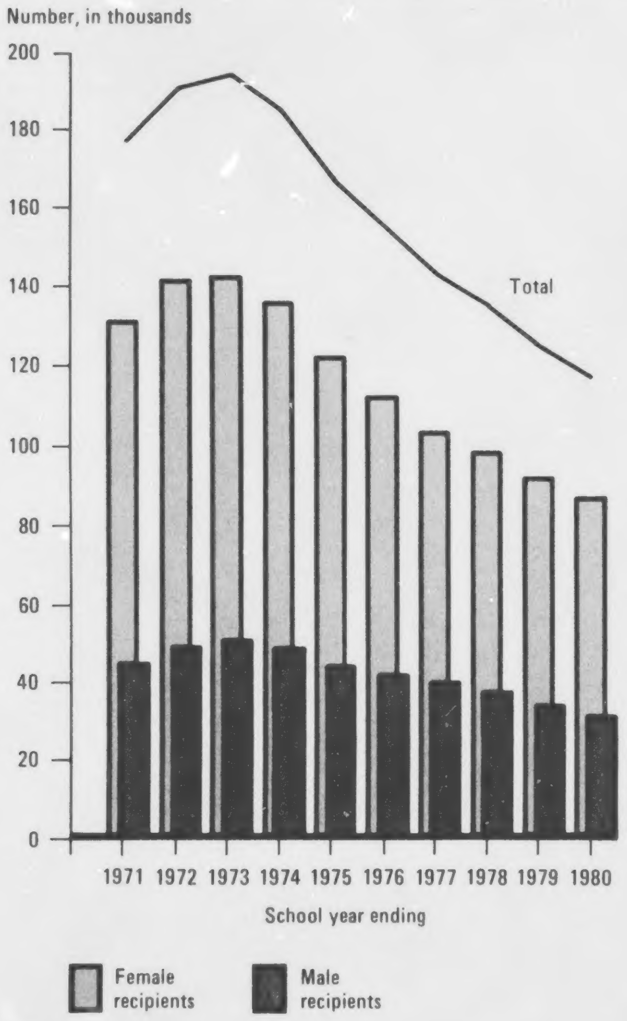
Table 3.4

Earned Bachelor's, Master's and Doctor's Degrees in Education, by Sex of Recipient: School Year 1970-71 to 1979-80

School Year Ending	Both Sexes			Male			Female		
		Education Degrees			Education Degrees			Education Degrees	
	Total	Number	Percent of Total	Total	Number	Percent of Total Males	Total	Number	Percent of Total Females
Bachelor's degrees:									
1971	839,730	**176,571**	21.0	475,594	**45,089**	9.5	364,136	**131,482**	36.1
1972	887,273	**191,172**	21.6	500,590	**49,531**	9.9	386,683	**141,641**	36.6
1973	922,362	**194,210**	21.1	518,191	**51,433**	9.9	404,171	**142,777**	35.3
1974	945,776	**185,181**	19.6	527,313	**49,141**	9.3	418,463	**136,040**	32.5
1975	922,933	**166,969**	18.1	504,841	**44,547**	8.8	418,092	**122,422**	29.3
1976	925,746	**154,758**	16.7	504,925	**42,046**	8.3	420,821	**112,712**	26.8
1977	919,549	**143,658**	15.6	495,545	**39,918**	8.1	424,004	**103,740**	24.5
1978	921,204	**136,079**	14.8	487,347	**37,463**	7.7	433,857	**98,616**	22.7
1979	921,390	**126,006**	13.7	477,344	**33,795**	7.1	444,046	**92,211**	20.8
1980	929,417	**118,102**	12.7	473,611	**30,896**	6.5	455,806	**87,206**	19.1
Master's degrees:									
1971	230,509	88,716	38.5	138,146	38,899	28.2	92,363	49,817	53.9
1972	251,633	97,880	38.9	149,550	41,728	27.9	102,083	56,152	55.0
1973	263,371	105,242	40.0	154,468	44,022	28.5	108,903	61,220	56.2
1974	277,033	112,252	40.5	157,842	45,004	28.5	119,191	67,248	56.4
1975	292,450	119,778	41.0	161,570	45,309	28.0	130,880	74,469	56.9
1976	311,771	127,948	41.0	167,248	45,659	27.3	144,523	82,289	56.9
1977	317,164	126,375	39.9	167,783	43,174	25.7	149,381	83,201	55.7
1978	311,620	118,582	38.1	161,212	38,281	23.8	150,408	80,301	53.4
1979	301,079	111,536	37.1	153,370	34,997	22.8	147,709	76,539	51.8
1980	298,081	103,453	34.7	150,749	30,875	20.5	147,332	72,578	49.3
Doctor's degrees:									
1971	32,107	6,398	19.9	27,530	5,043	18.3	4,577	1,355	29.6
1972	33,363	7,041	21.1	28,090	5,381	19.2	5,273	1,660	31.5
1973	34,777	7,314	21.0	28,571	5,501	19.3	6,206	1,813	29.2
1974	33,816	7,293	21.6	27,365	5,316	19.4	6,451	1,977	30.7
1975	34,083	7,443	21.8	26,817	5,147	19.2	7,266	2,296	31.6
1976	34,064	7,769	22.8	26,267	5,176	19.7	7,797	2,593	33.3
1977	33,232	7,955	23.9	25,142	5,186	20.6	8,090	2,769	34.2
1978	32,131	7,586	23.6	23,658	4,630	19.6	8,473	2,956	34.9
1979	32,730	7,731	23.6	23,541	4,468	19.0	9,189	3,263	35.5
1980	32,615	7,940	24.3	22,943	4,419	19.3	9,672	3,521	36.4

Source: U.S. Department of Education, National Center for Education Statistics, *Earned Degrees Conferred*, various years.

Earned Bachelor's Degrees in Education



Among bachelor's degree recipients, the number of graduates in education rose in the early 1970's and then declined through the remainder of the decade. Of these graduates, the proportion of females decreased more sharply than the proportion of males.

Table 3.5

Elementary/Secondary School Teaching Status of 1976-77 Bachelor's Degree Recipients Newly Qualified to Teach, by Field of Teacher Preparation: February 1978

Field	Total Newly Qualified to Teach	Did Not Apply for Teaching Job	Applied for Teaching Job				
			Total Applied	Total Teaching[1]	Teaching		Not Teaching
					Full-Time	Part-Time	
				Number			
All fields	177,200	40,000	137,200	106,200	86,800	19,400	31,000
General elementary	47,700	6,400	41,300	33,800	27,800	6,000	7,500
Special education	24,100	3,500	20,600	17,400	15,400	2,100	3,100
Social science	12,700	3,200	9,500	7,000	5,700	1,200	2,500
Physical education	10,400	1,700	8,700	6,500	5,400	1,100	2,200
English	8,300	1,100	7,200	5,100	4,800	200	2,100
Music	7,500	1,700	5,800	4,300	2,900	1,400	1,500
Art	5,600	1,900	3,800	2,300	1,100	1,300	1,500
Mathematics	5,000	1,100	3,900	2,900	2,800	100	1,000
Vocational education	4,500	900	3,600	2,800	2,400	400	800
Business	3,800	2,000	1,900	1,500	1,300	200	400
Industrial arts	3,600	800	2,800	2,100	1,900	200	700
Other[2]	20,000	6,600	13,400	10,500	8,200	2,300	2,900
More than one field	23,000	9,300	13,800	9,100	6,900	2,200	4,700
No certification	1,000	(3)	1,000	1,000	400	600	(3)
				Percent			
All fields	100	23	77	60	49	11	17
General elementary	100	13	86	71	58	13	16
Special education	100	14	85	72	64	9	13
Social science	100	25	75	55	45	10	20
Physical education	100	16	84	63	52	11	21
English	100	13	87	61	58	3	26
Music	100	23	77	57	38	19	20
Art	100	23	67	41	19	22	26
Mathematics	100	22	79	58	55	3	21
Vocational education	100	19	81	62	53	9	19
Business	100	52	49	39	34	4	10
Industrial arts	100	22	78	57	51	6	20
Other[2]	100	33	67	53	41	11	15
More than one field	100	40	60	39	30	9	20
No certification	100	(3)	100	100	40	60	(3)

[1] Includes teaching as a second job.

[2] Data for the following fields are included in the "other" category because their sample sizes are too small to present them individually: biological science, foreign language, health, economics, reading, physical science, bilingual education, and English as a second language.

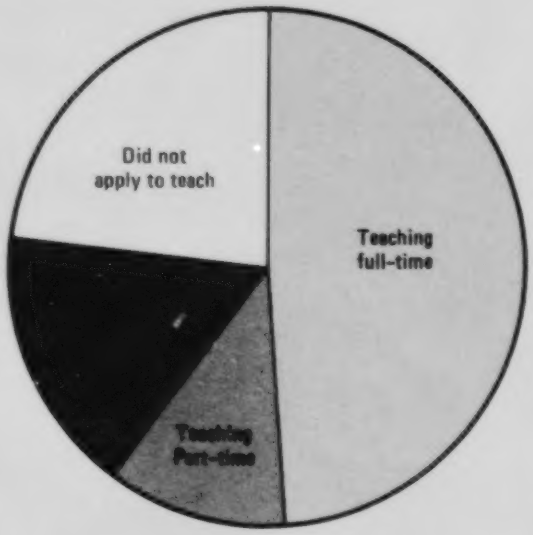
[3] Zero in sample.

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Education, National Center for Education Statistics, *New Teachers in the Job Market,* 1981.

Chart 3.5

Teaching Status of 1976-77 Newly Qualified Teachers in 1978



Of the 177,200 bachelor's degree recipients of 1976-77 who were newly qualified to teach, 77 percent applied for teaching jobs and 60 percent were teaching by February 1978. Less than half of those qualified to teach with degrees in the fields of art and business were teaching one year following graduation.

Table 3.6

Employed Teachers and Teacher Layoffs and Shortages in Public and Private Elementary/Secondary Schools, by Field of Assignment: Spring 1979

Field of Assignment	Employed Teachers[1]		Layoffs[2]		Shortages[3]	
	Number[4]	Percent of All Teachers	Number	Percent of All Layoffs	Number	Percent of All Shortages
Total	2,552,000	100.0	23,900	100.0	11,300	100.0
Preprimary	99,000	3.9	1,300	5.5	700	6.3
Primary and general elementary	899,000	35.2	7,800	32.8	2,600	23.3
Art	57,000	2.2	1,100	4.5	100	.8
Basic skills and remedial education	9,000	.3	100	.5	(5)	(5)
Bilingual education	22,000	.9	200	1.0	400	3.7
Biology	30,000	1.2	300	1.1	100	.9
Business	45,000	1.8	400	1.7	200	1.8
English language arts	188,000	7.4	1,800	7.6	200	2.2
Foreign languages	53,000	2.1	800	3.3	100	1.1
General science	76,000	3.0	700	3.0	200	2.1
Health, physical education	158,000	6.2	1,100	4.7	100	1.2
Home economics	36,000	1.4	500	2.3	(5)	(5)
Industrial arts	41,000	1.6	400	1.8	600	5.3
Mathematics	150,000	5.9	1,100	4.4	900	8.3
Music	87,000	3.4	900	3.7	200	1.4
Reading	73,000	2.9	400	1.5	300	2.8
Physical sciences	25,000	1.0	100	.5	600	5.5
Social studies/social sciences	143,000	5.6	1,300	5.5	100	.8
Special education	219,000	8.6	2,700	11.5	3,200	28.3
Vocational education	101,000	4.0	600	2.5	300	2.9
Other	39,000	1.5	100	.4	100	1.1

[1] Includes all full-time and part-time classroom teachers in public and private elementary/secondary schools during the 1979-80 school year.

[2] A layoff represents a teacher whose contract was not renewed at the end of the 1978-79 school year because of budget limitations, and whose position was not subsequently filled.

[3] A shortage represents a teaching position opening (budgeted new position or position vacancy) occurring from spring 1979 to fall 1979 (for the 1979-80 school year) for which teachers were sought but were unable to be hired because no qualified candidate was available.

[4] These figures represent unduplicated counts of teachers among fields. Teachers in more than one field were reported only in the field in which they spent most of their teaching time. The exception was that any teacher engaged in bilingual or special education was counted in either of those areas regardless of the time spent in other areas.

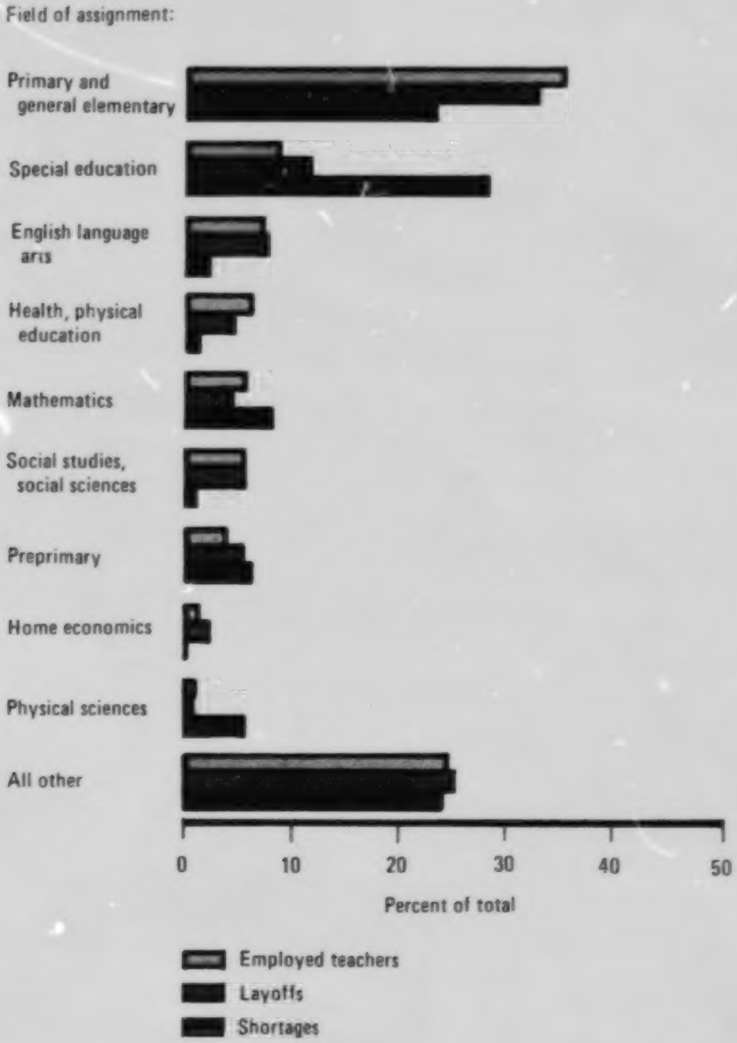
[5] Less than 100 positions.

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Education, National Center for Education Statistics, Survey of Teacher Demand and Shortages, "Teacher Layoffs, Shortages in 1979 Small Compared with Total Employed", NCES 81-121a, 1981.

Chart 3.6

Employed Teachers and Teacher Layoffs and Shortages by Field as Percent of Total Employed Teachers and Teacher Layoffs and Shortages



While 23 percent of teacher shortages were in elementary education, an even larger proportion of layoffs were in that field in 1979. Fields in which the number of shortages exceeded the number of layof[illegible] were bilingual education, industrial arts, physical sciences, and special education.

Table 3.7

Salaries of Classroom Teachers in Regular Public Elementary/Secondary Schools with Alternative Projections: School Year 1970-71 to 1990-91

School Year Ending	Number of Classroom Teachers, in Thousands	Average Annual Salaries of Classroom Teachers			
		Current Dollars		Constant 1980-81 Dollars	
1971	2,055	$ 9,269		$20,168	
1972	2,063	9,705		20,380	
1973	2,103	10,176		20,533	
1974	2,138	10,778		19,974	
1975	2,165	11,690		19,500	
1976	2,196	12,591		19,615	
1977	2,186	13,355		19,669	
1978	2,209	14,213		19,604	
1979	2,206	15,043		18,970	
1980	2,181	15,966		17,764	
1981	2,163	17,264		17,264	
	Projected		Alternative Projections[1]		
			Low	Intermediate	High
1982	2,119	–	$17,000	$17,069	$17,137
1983	2,099	–	17,000	17,644	18,288
1984	2,100	–	17,000	18,239	19,477
1985	2,098	–	17,000	18,337	19,673
1986	2,128	–	17,000	19,018	21,036
1987	2,163	–	17,000	19,328	21,655
1988	2,201	–	17,000	19,491	21,982
1989	2,238	–	17,000	19,536	22,071
1990	2,278	–	17,000	19,781	22,562
1991	2,333	–	17,000	20,113	23,225

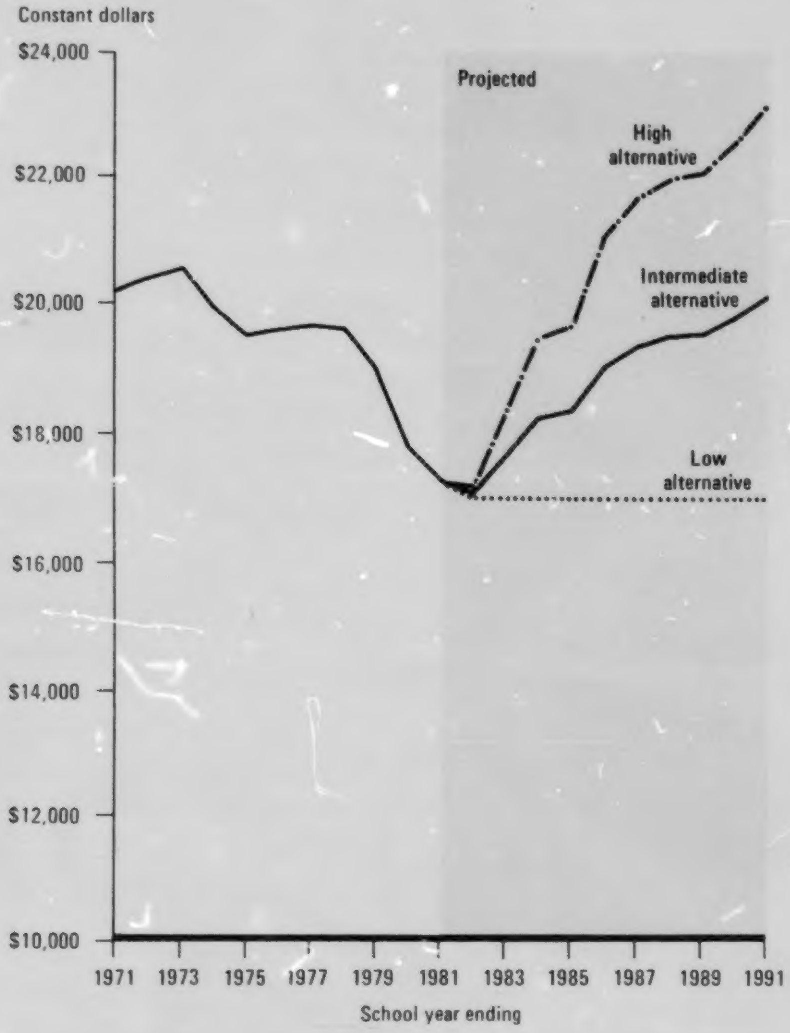
– Not available.

[1] The high alternative is based on projections of demand for additional teachers and per capita personal income. The low projection assumes average salary will remain constant at the 1980-81 level and the intermediate alternative is the average of the high and low.

Source: U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics to 1990-91,* forthcoming.

Chart 3.7

Salaries of Classroom Teachers in Regular Public Elementary/Secondary Schools



The buying power of teachers' salaries decreased by nearly 15 percent during the 1970's. In the next decade, teachers' salaries are expected to begin increasing as the demand for teachers grows.

Table 3.8

Opinions of Public School Teachers Toward Job Satisfaction, by Region, Enrollment Size of School District, and Teaching Level: 1980

Item	Total	Region[1]				Enrollment Size of School District			Teaching Level		
		Northeast	Southeast	Middle	West	Under 3,000	3,000-24,999	25,000 and Over	Elementary	Junior high	Senior high
"Each of the following affects teacher morale. Has each had a positive or negative effect on your job satisfaction?"											
	Percent Who Responded That an Item Had a Negative Effect on Morale										
Salary	58	49	70	52	61	57	59	58	51	63	65
Class size(s)	42	42	43	37	48	30	44	51	43	43	38
Physical facilities/environment	36	39	37	33	37	33	37	39	33	39	41
Job security	23	27	16	26	22	19	24	24	21	24	27
Public attitudes toward school	66	74	60	63	67	62	66	70	62	68	71
Status of teachers in the community	52	61	43	52	52	49	52	54	49	52	55
Treatment of education by the media	60	66	56	56	63	51	60	68	58	60	63
Relationship with parents	25	29	32	21	21	22	25	30	23	27	28
Student behavior	49	51	52	44	49	44	47	57	44	53	50
Student attitude toward learning	60	62	61	57	61	59	58	65	48	70	73
Relationships with other teachers	9	10	8	9	8	9	9	9	8	9	10
Intangible rewards from teaching	20	23	24	18	17	17	18	26	17	22	22
Opportunity for professional growth	37	42	33	37	36	38	36	39	32	41	43

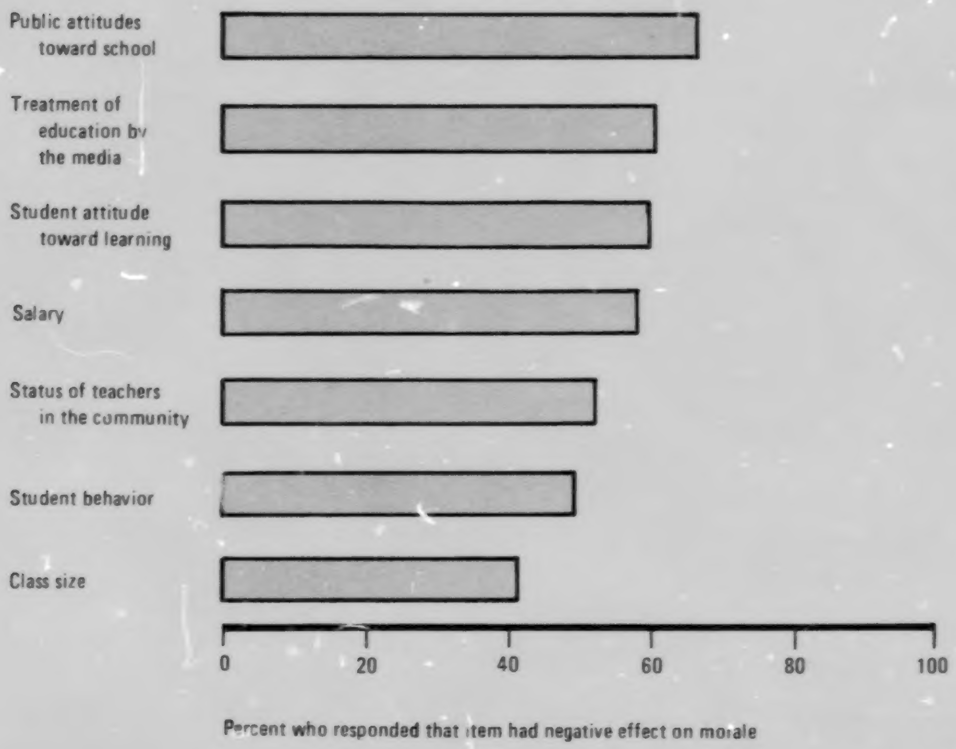
[1] Regions defined by the National Education Association. See Appendix, Definitions, for the list of States comprising each region.

Source: National Education Association, *National Teacher Opinion Poll,* 1980.

Chart 3.8

Job Satisfaction: Opinions of Public School Teachers

"Each of the following affects teacher morale. Has each had a positive or negative effect on your job satisfaction?"



More than half of all teachers believed that salary, community and media attitudes, teachers' status, and student attitudes towards learning had a negative effect on their job satisfaction. Salary had a more negative effect in the South than in other regions. In nearly every category, secondary school teachers were more likely than teachers of other levels to respond that an item had a negative effect.

Table 3.9

Opinions of Public School Teachers Toward Their Profession: 1961, 1966, 1971, 1976, and 1981

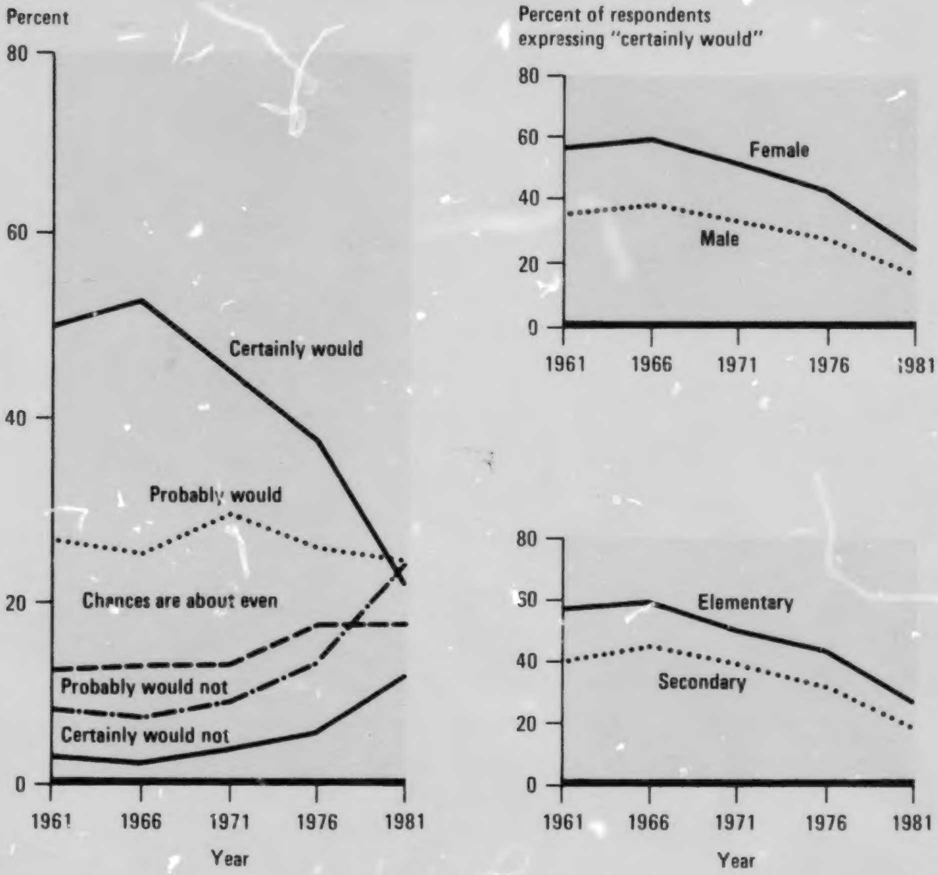
Responses	Year				
	1961	1966	1971	1976	1981
"Suppose you could go back to your college days and start over again; in view of your present knowledge, would you become a teacher?"					
	Percentage Distribution of Responses				
Total	100.0	100.0	100.0	100.0	100.0
Certainly would	49.9	52.6	44.9	37.5	21.8
Male	35.2	38.0	33.0	27.3	16.0
Female	56.6	59.2	51.1	42.5	24.8
Elementary	57.3	59.6	50.1	43.5	26.4
Secondary	40.0	44.9	39.1	31.7	18.1
Under age 30	–	49.2	41.4	35.6	28.5
Age 30 to 39	–	50.9	40.1	34.5	16.2
Age 40 to 49	–	48.9	47.1	41.6	21.3
Age 50 and over	–	60.2	53.0	41.3	27.3
Probably would	26.9	25.4	29.5	26.1	24.6
Chances are about even	12.5	12.9	13.0	17.5	17.6
Probably would not	7.9	7.1	8.9	13.4	24.0
Certainly would not	2.8	2.0	3.7	5.6	12.0

– Not available.

Source: National Education Association, *Status of the American Public School Teacher*, various years.

Attitudes Toward the Teaching Profession: Opinions of Public School Teachers

"Suppose you could go back to your college days and start over again; in view of your present knowledge, would you become a teacher?"



The proportion of teachers who would choose the teaching profession if they had a chance to start over declined considerably from 1961 to 1981. In every year, men were less likely than women to affirm their original choice, and secondary teachers were less likely than elementary teachers to do so.

Table 3.10

Public Opinion Ratings of Local Public Schools, School Personnel, and Parents: 1981

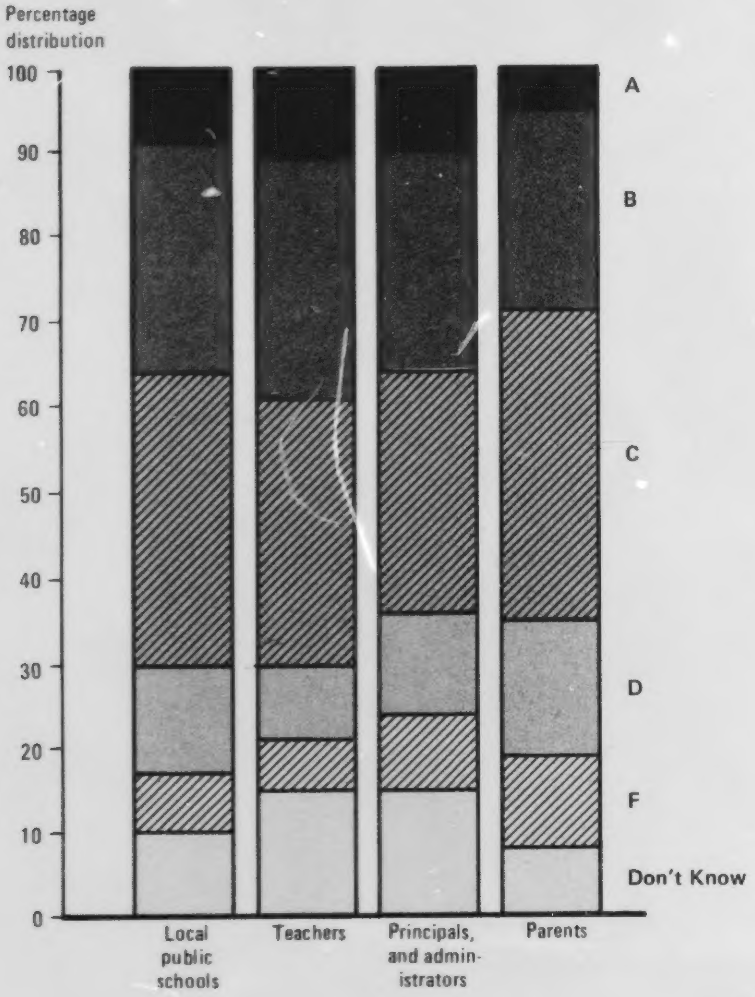
Question	Rating					
	A	B	C	D	Fail	Don't Know
	Percentage Distribution of Respondents					
Question: Students are often given the grades A, B, C, D, and Fail to denote the quality of their work. Suppose the public schools themselves, in this community, were graded in the same way. What grade would you give the public schools here – A, B, C, D, or Fail?	9	27	34	13	7	10
Question: Now, what grade would you give tne teachers in the public schools in this community – A, C, C, D, or Fail?	11	28	31	9	6	15
Question: What grade would you give the principals and administrators in the local public schools in this community – A, B, C, D, or Fail?	10	26	28	12	9	15
Question: What grade would you give parents in this community for the job they are doing in raising their children to be self-disciplined and responsible young people – A, B, C, D, or Fail?	5	24	36	16	11	8

Source: George H. Gallup, "Taking Education's Pulse: The 13th Annual Gallup Poll of the Public's Attitudes Toward the Public Schools", *Principal,* Vol. 61, No. 1, September, 1981 and Phi Delta Kappa, *Phi Delta Kappan,* September, 1981.

Chart 3.10

Public Opinion Ratings of Local Public Schools, Personnel, and Parents

"Students are often given the grades A, B, C, D, and Fail to denote the quality of their work. What grade would you give the following?"



Teachers along with principals and administrators were rated above average or superior by over one-third of the public, a larger proportion than gave parents similar high marks.

Table 3.11

Scholastic Aptitude Test (SAT) Scores of College-bound Seniors, by Intended Area of Study: 1973 to 1981

Intended Area of Study	1973		1975		1977		1979		1981	
	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math	Verbal	Math
	Mean Test Score									
National total	**445**	**481**	**434**	**472**	**429**	**470**	**427**	**467**	**424**	**466**
Art and humanities	–	–	–	–	444	460	436	452	434	453
Architecture/ environmental design	438	515	430	507	425	505	418	495	414	489
Art	440	451	435	445	412	425	404	421	403	421
English/literature	500	481	488	465	504	478	505	478	507	482
Foreign language	491	498	481	486	481	483	475	476	474	477
Music	465	487	448	464	445	463	437	456	435	454
Philosophy and religion	479	500	469	484	467	487	465	482	463	481
Theater arts	–	–	–	–	447	438	437	433	439	436
Biological sciences and related areas	–	–	–	–	438	479	435	472	433	472
Agriculture	427	471	423	459	418	457	408	443	404	440
Biological sciences	493	533	481	525	475	515	472	507	471	504
Forestry/conservation	–	–	–	–	426	467	420	456	418	452
Health and medical	–	–	–	–	433	474	430	469	428	469
Nursing and health	419	444	410	444	–	–	–	–	–	–
Business, commerce, and communication	–	–	–	–	412	454	408	448	406	44[illegible]
Business and commerce	409	463	406	461	402	453	400	447	398	446
Communications	476	483	458	461	459	460	448	449	443	446
Physical sciences and related areas	–	–	–	–	454	549	448	535	443	527
Computer science/systems analysis	–	–	–	–	422	505	419	498	416	492
Engineering	460	548	450	541	448	546	445	536	446	534
Mathematics	481	595	463	580	464	588	459	580	456	572
Physical sciences	505	570	501	565	500	572	498	561	498	558
Social sciences and related areas	–	–	–	–	432	453	429	449	429	449
Education	**418**	**449**	**405**	**434**	**400**	**426**	**392**	**420**	**391**	**418**
Ethnic studies	–	–	–	–	381	396	372	386	381	395
Geography	–	–	–	–	421	473	438	481	422	474
History and cultures	–	–	–	–	478	474	478	471	482	472
Home economics	413	441	409	442	399	428	389	417	383	411
Library science	–	–	–	–	478	453	476	448	464	431
Military science	–	–	–	–	435	489	434	481	433	474
Psychology	–	–	–	–	444	455	435	447	433	447
Social sciences	476	490	465	476	456	474	455	472	456	474
Miscellaneous	–	–	–	–	431	473	420	458	420	459
Other	–	–	–	–	422	458	396	430	395	431
Trade and vocational	400	450	370	405	357	400	353	394	350	391
Undecided	–	–	–	–	448	491	441	480	440	480
Other/undecided	446	489	438	477	–	–	–	–	–	–

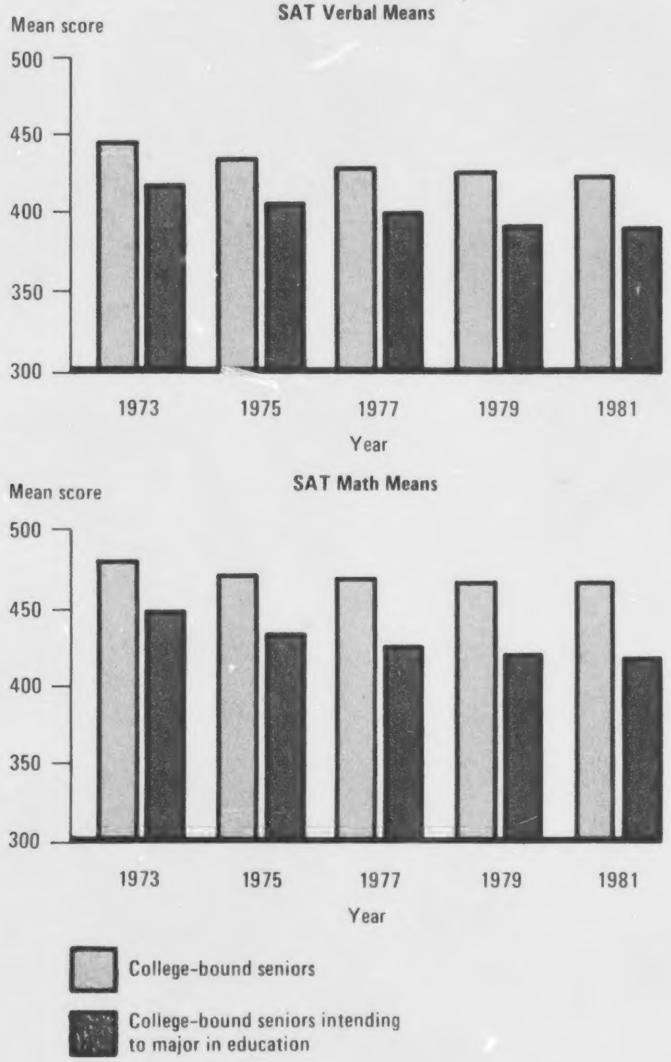
– Not available.

Note: 1973 and 1975 data are based on a 10 percent random sample.

Source: College Entrance Examination Board, *A Summary of SAT Score Statistics for College Board Candidates, 1976, National Report, College-Bound Seniors, 1979, 1981,* and unpublished tabulations of the College Board, copyright.

Chart 3.11

Scholastic Aptitude Test (SAT) Score Averages for College-Bound Seniors



From 1973 to 1981, the national mean SAT verbal and math scores dropped from 445 and 481 to 424 and 466, respectively. During the same time period, among college-bound seniors who intended to major in education, SAT verbal scores decreased from 418 to 391 while math scores dropped from 449 to 418.

Table 3.12

Scholastic Aptitude Test (SAT) Scores of 1972 High School Seniors Who Graduated with 4-Year Degrees and Students with Education Majors and/or Certification to Teach, by Sex and by Employment Status: 1979

Employment Status	Mean SAT Verbal Score			Mean SAT Math Score		
	Total	Male	Female	Total	Male	Female
All 4-year college graduates:	487	489	486	526	548	502
Teaching in preprimary, elementary/secondary schools[1]	452	440	455	478	493	475
Employed in other professional, technical or managerial job	493	491	496	537	558	513
Other employed	475	477	473	509	524	487
Not in labor force[2]	514	530	499	546	593	506
Education majors and those certified to teach:	449	445	450	483	507	475
Teaching in preprimary, elementary/secondary schools	449	440	451	476	499	471
Employed in other education related jobs[3]	434	417	440	475	481	473
Employed in non-education related jobs	453	458	450	492	519	475
Not in labor force[2]	482	—	477	493	—	486

– Not available.

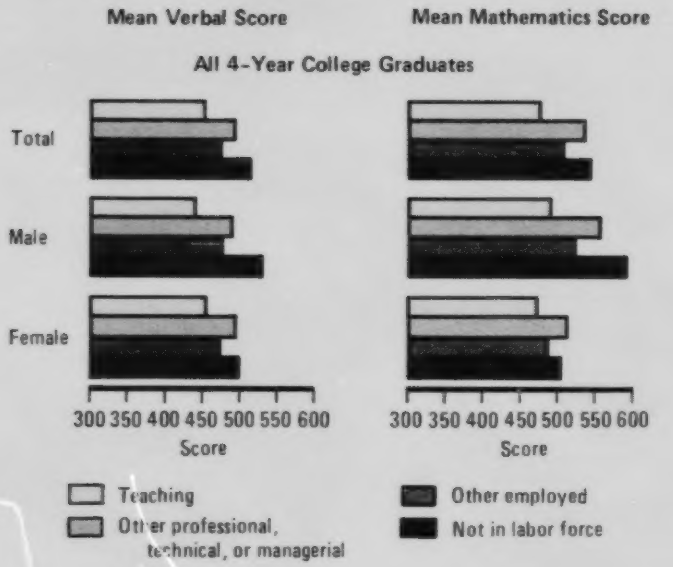
[1] Includes education majors, those certified to teach and those who do not report themselves as certified to teach.

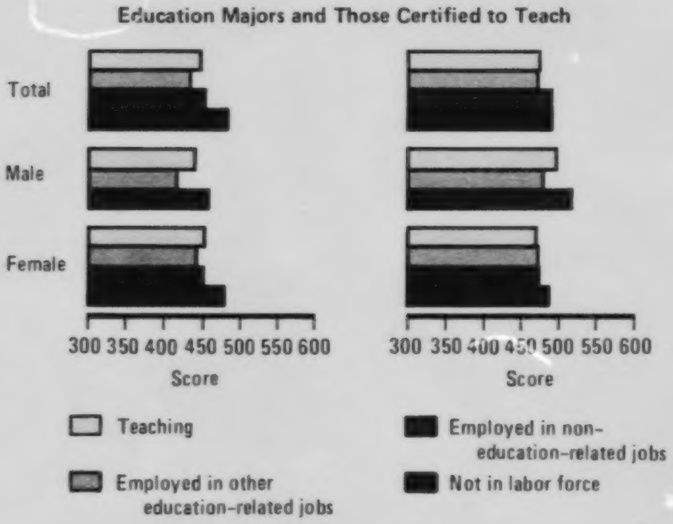
[2] Includes the unemployed, students, and others not in the labor force.

[3] Includes college teachers, other teachers, and education administrators.

Source: U.S. Department of Education, National Center for Education Statistics, National Longitudinal Study, unpublished tabulations.

Scholastic Aptitude Test (SAT) Scores, by Sex and Employment Status





Among high school seniors of 1972, those who went into teaching had lower SAT scores than other college graduates employed in different professions. Scores were not significantly different, however, between education majors who went into teaching and education majors who were employed in other fields.

Table 3.13

States with Competency-based Teacher Certification Provisions, by Authorization, Year Adopted, Year Effective, Type of Test, Type of Teachers Assessed: 1981

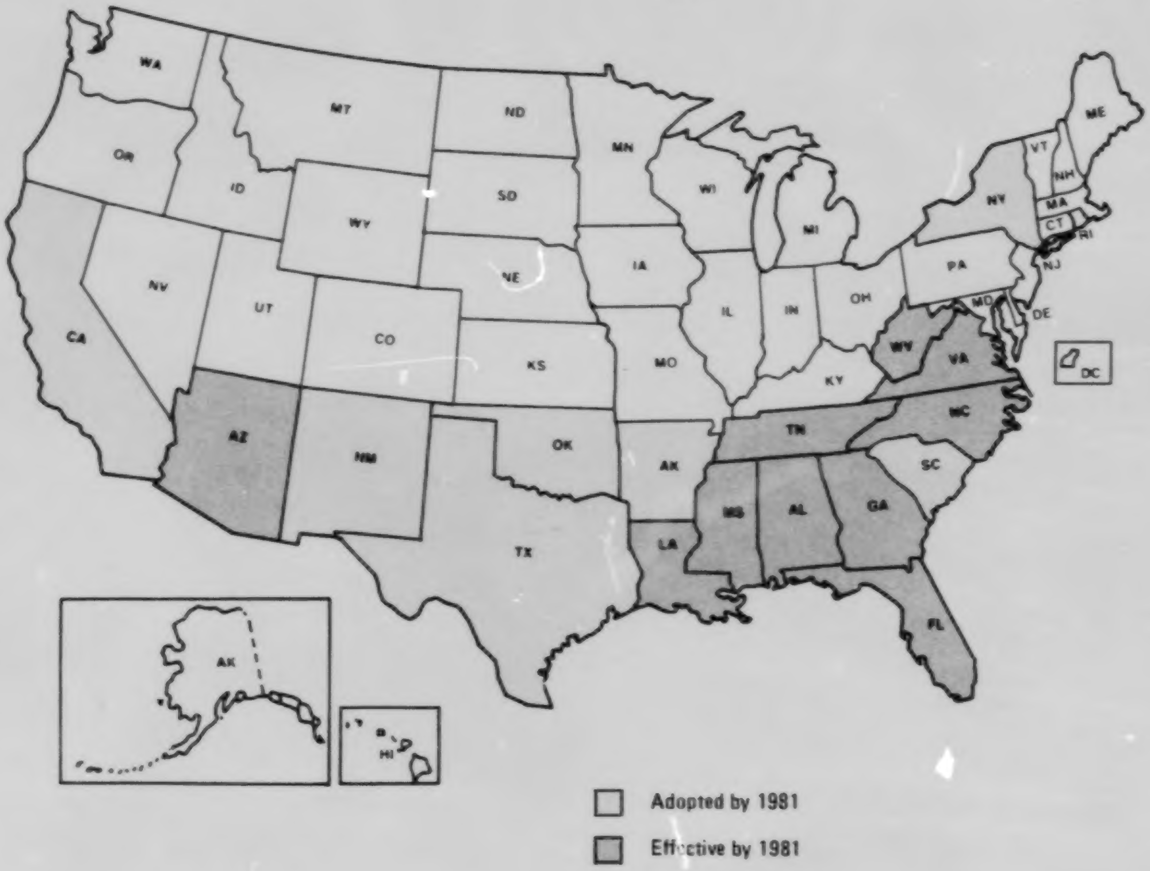
State	Authorization	Year Adopted	Year Effective	Type of Test	Test Required of
Alabama	SBE	1980	1981	State	TC
Arizona	Legislature Section 15-235 and 236 of Education Code	1980	1980	State	TC
Arkansas	Legislature H.B. 475	1979	1980 extended to 1983	NTE	TC
California	Legislature A.B. 757	1981	1982	State	TC
Florida	Legislature CB/SB 549	1978	1980	State	TC
Georgia	SBE	1975	1978	State	TC
Louisiana	Legislature	1977	1979	NTE	TC
Mississippi	Legislature	1972	1972	NTE	TC
New Mexico	SBE	1981	1983	State	TC
New York	Regents	1980	1984	State	TC
North Carolina	SBE	1979	1981	State	EM
Oklahoma	Legislature H.B. 1706	1980	1982	State	TC
South Carolina	Legislature S. 528	1979	1982	NTE/State	TC
Tennessee	SBE	1980	1981	NTE	TC
Texas	Legislature S.B. 50	1981	Not set	State	TC
Virginia	Legislature H 1723	1980	1980	NTE	TC
West Virginia	SBE	1961	1964	NTE	TC

SBE – State Board of Education.
NTE – National Teacher Examinations.
EM – Education majors.
TC – Teaching candidates.

Source: Education Commission of the States, Research and Information Department, unpublished data.

Chart 3.13

State Competency-Based Teacher Certification Provisions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☐ Adopted by 1981
▨ Effective by 1981

By 1981, 17 States had adopted competency-based certification for teaching candidates or education majors. In 10 States, these provisions were already in effect and in 3 more, testing was to begin in 1982.

Chapter 4
Postsecondary Education

The availability and viability of postsecondary education concerns governments, businesses, and society in general, as well as current and prospective students and their families. Two factors — population shifts and economic conditions — are currently having serious effects on postsecondary education and on planning its future. This chapter highlights data which may be useful background for debate and policy directions for the next decade.

Enrollment in postsecondary education has been the subject of much study and, with regard to the future, speculation. The declining size of the age group which historically has comprised the majority of higher education enrollments has engendered concern about possible enrollment declines. Yet many factors appear to be influencing higher education enrollments, and reviews of recent trends have the effect of tempering predictions based on the size of population groups alone. Enrollment patterns by age and sex will be noted in this chapter, together with trends in enrollments of entering freshmen. Enrollments of racial/ethnic groups will be examined also, as the access of minority groups to higher education has been of special interest.

The current structure and organization of both collegiate and noncollegiate postsecondary education are described in this chapter. They serve as the framework for examining the financial condition of the institutions. Sources of funds for postsecondary institutions, as well as expenditures by the institutions for various purposes, including student aid, are discussed in the context of the economic climate of the past decade. The resources and responsibilities of students and their families are taken as the starting point in viewing sources of student funding. Chapter 5 includes a description of the relationships among postsecondary educational attainment and achievement, labor force status, and economic outcomes.

Enrollment

Since there is no boundary limiting the age at which an adult may enroll for some type of postsecondary education, the total adult population constitutes a potential base for enrollments. The traditional age for postsecondary education enrollment is considered to be 18 to 24 years old. But the population of this age group will decrease over the current decade at a rate that is expected to reduce its size by 4.3 million persons by 1990, 15 percent fewer than in 1980 (entry 4.1). At the same time, the age group 25 to 49 years old will grow by about 25 percent, with an increase of 18.6 million persons from 1980 to 1990. Persons born at the height of the baby-boom, during the late 1950's, will be 30 to 34 years old in 1990. This age group will be 21 percent larger in that year than in 1980.

Increases in higher education enrollments of older students (those 25 years old and over) may offset the anticipated enrollment declines of college students aged 18 to 24 years old, assuming existing trends continue (entry 4.2). In 1970, 72 percent of the students were below 25 years of age. During the 1970's, the number of college students under 25 years old increased about 22 percent, slightly faster than the 20 percent increase in the population of this age group. The result was a jump in enrollment from 6.2 million in 1970 to 7.6 million in 1980. At the same time, enrollments of students 25 years old and over increased from 2.4 million to 4.5 million, the result of growth in the older population together with higher enrollment rates among these older adults. The combined enrollment increases of younger and older students caused total enrollment to rise from 8.6 million in 1970 to 12.1 million in 1980.

Looking into the 1980's, the traditional college-age population will decrease in size by about 15 percent, probably resulting in an enrollment decline of more than 1.1 million 18- to 24-year-olds. However, if enrollment rates among older students continue at their 1980 levels, the larger population of persons 25 or more years of age would yield an increase of about 1.1 million older students in 1990. These trends would produce a different mix of age groups in the student population. Older students would account for 47 percent of the 12.1 million students enrolled, instead of the 38 percent of the total that they comprised in 1980 and the 28 percent in 1970.

Older students have been more likely to enroll on a part-time basis than younger students. Hence, as more older students enrolled, one could also expect to find increases in part-time enrollment. In fact, part-time enrollments could constitute 46 percent of the total by 1990, compared to less than one-third in 1970.

In addition to older adults, important contributing factors to enrollment projections are enrollment rates for women and racial/ethnic groups. First-time and total enrollments of females grew faster than those of males between 1970 and 1980 (entry 4.3). The increases for females in first-time and total enrollments were 50 and 76 percent, while corresponding increases for males were 6 and 17 percent, respectively. Total enrollments of females increased each year during the period, as did female first-time enrollment, except in 1976. First-time and total enrollments of males peaked in 1975, then declined for three years until they rose again in 1979; in 1980, these enrollments were still below their high points in 1975. As a result of these trends, females outnumbered males in higher education in 1979 and 1980.

Any examination of higher education enrollment rates among racial/ethnic groups must include an examination of high school graduation rates for those groups, since most colleges and universities require high school graduation as a minimum credential for admission. In 1980, just over 80 percent of white 18-to 24-year-olds had graduated from high school compared to rates of 70 percent for blacks and 54 percent for Hispanics (entry 4.4). Because for minorities the pools of potential entrants into college were smaller in relation to their population, it is to be expected that their college enrollment rates would be lower. In fact, in 1980 the proportions of the 18- to 24-year-old populations enrolled in college for whites, blacks, and Hispanics were 26, 19, and 16 percent, respectively. But if college enrollment is taken as a percent of the eligible population, high school graduates, instead of as a percent of the total population, the differences are much smaller. In 1980, college enrollment as a percent of high school graduates among whites, blacks, and Hispanics was 32, 28, and 30 percent, respectively.

Between 1970 and 1980, the proportion of high school graduates among 18- to 24-year-old whites remained fairly stable, but for blacks it increased from 60 to 70 percent. The fact that this rate for blacks is increasing may result in increases in their representation in college in the future. The proportion of high school graduates among Hispanics appears to be less encouraging. While data for 1970 are not available, the proportion in 1975 was over 57 percent; by 1980 it had dropped to 54 percent. These results do not necessarily indicate a trend, however. There has been some difficulty in measuring the Hispanic population and recent immigration of Hispanics into this country may make interpretations of trends difficult.

Participation of minorities in higher education has grown most notably at the undergraduate level. Between 1978 and 1980, each minority group, except blacks, had a higher percent increase in enrollments than whites (entry 4.5). Although a comparatively brief period is covered by this change and these data should be monitored carefully in the future, the picture suggests that enrollments of minority groups may continue to grow at the undergraduate level. At the graduate level, each minority group, except black students, had increased enrollment from 1978 to 1980. Nonresident aliens, a group of students for whom racial/ethnic designation is not collected, displayed larger increases in undergraduate and graduate enrollment than did any of the groups of U.S. citizens. In fact, there were almost as many nonresident aliens enrolled in graduate schools in 1980 as there were black, Hispanic, and American Indian/Alaskan Native students combined. In contrast, at the first-professional level, enrollment of nonresident aliens declined, while enrollment for U.S. citizens increased, with minority enrollments increasing faster than those of whites.

Postsecondary Institutions

Postsecondary education is offered by many types of institutions as well as by other organizations and groups. Programs sponsored by business organizations, which may be organized institutes offering complete curricula, are a growing part of postsecondary education. On-the-job training is not only an informal, but often a structured, routine part of an employee's work experience. Many small businesses, organizations, or schools that are not part of the networks of accredited institutions or associations serving particular academic or vocational groups, are nonetheless providers of postsecondary education to many persons.

Currently, it is not possible to describe completely the size, much less the shape and character, of this universe of postsecondary education providers. At this time, two significant portions can be defined with some precision: institutions of higher education and noncollegiate postsecondary schools offering occupational programs. Accreditation is the basis upon which inclusion or exclusion in the higher education universe is determined; a tradition of voluntary participation is the basis for inclusion in the noncollegiate group. Changes in accreditation may alter the contours of parts of the universe, making real growth or change difficult to determine. With these considerations in mind, it was possible to identify about 11,000 institutions offering postsecondary education in 1980, in the United States and its outlying areas (entry 4.6). Almost 3,300 of these institutions were at the college level, including universities and other 4-year institutions, and 2-year junior and community colleges. The other 7,700 were noncollegiate postsecondary schools offering occupational programs.

Characteristics of these postsecondary education institutions differed markedly depending upon how they are controlled. Institutions controlled by organized governmental units (hereafter referred to as "public") exhibited differences in program offerings, financial operation, and enrollments from those identified as independent nonprofit, organized as profitmaking, or affiliated with a religious group (hereafter called "private"). Thus, while institutions of both groups may be open to the public, the reference to schools as public or private provides a useful basis for more detailed descriptive examination of distinct groups.

Among public institutions in 1980, noncollegiate vocational/technical schools were about as prevalent as universities and other 4-year institutions, constituting nearly 25 percent of the group, compared with 23 percent for the 4-year institutions. In the public sector, the number of vocational/technical schools increased slightly from 1976 to 1980. Technical institutes declined as a share of the public institutions as a result of a definitional change in school categories. Each of the two college-level categories ("universities and other 4-year" and "2-year") remained at a stable proportion of the public sector totals from 1976 to 1980.

In the private sector, various types of specialized vocational schools, generally with small enrollments, outnumbered college-level institutions. For example, cosmetology/barber schools were considerably more numerous than the combined total of private institutions of higher education. Changing accreditation standards prompted some shifts in the distribution of schools; notably, 77 private technical institutes accredited by the National Association of Trade and Technical Schools (NATTS) received higher education status between 1978 and 1980. Despite the reclassification of this group of schools and because of the large total number of private postsecondary schools (over 8,500), the distribution of various types of institutions remained essentially stable from 1976 to 1980 in the private sector.

The heterogeneous character of postsecondary education institutions requires that enrollment counts for these institutions be described separately. Because programs differ in hours required for completion as well as in calendar time, program enrollments in, for example, flight schools, are not strictly comparable to fall enrollments in private 4-year institutions.

Fall enrollment in higher education, recorded as a single snapshot count of enrollment early in the academic year, rose to a high of 12.2 million in fall 1980 for the 50 States, D.C., and outlying areas (entry 4.7). Of the total, more than three-fourths was in public institutions; less than one-fourth in private institutions. The enrollment in public schools was almost evenly divided between 4-year institutions and 2-year colleges, while most of the enrollment in private schools (92 percent) was in 4-year institutions. These percentages remained quite stable between 1976 and 1980.

Formal degree awards by these institutions are important outcomes of postsecondary education. Bachelor's degrees were the most numerous, with 929,000 at that level awarded in 1980 (entry 4.8). The three postbaccalaureate degree categories combined — master's, doctor's, and first-professional — accounted for over 400,000 additional awards. About two-thirds of the bachelor's, master's, and doctor's degrees were earned at public institutions. But this pattern was virtually reversed for first-professional degrees, where over 60 percent of those degrees were earned at private institutions.

Enrollment figures for noncollegiate postsecondary schools included all persons enrolled throughout the calendar year. Since some programs lasted only a few weeks, it is possible that some students completed more than one program during a single year. Therefore, these figures reported the numbers of persons served by these schools during the year, but not total enrollment in the schools at one point in time. Over 1.6 million students enrolled in noncollegiate postsecondary schools in 1980, up from 1.4 million in 1976 (entry 4.9). Of the total in 1980, about one-third was in public schools and two-thirds in private schools. Within these two groups, enrollment patterns differed considerably. The overwhelming majority of enrollment in public schools, over 95 percent, was in vocational/technical schools, while the largest shares of enrollment in private schools were in such specialized schools as business/commercial (45 percent), cosmetology/barber (13 percent) or trade/arts and design (19 percent).

Enrollment distributions in 1980 represented some differences from 1976 that primarily reflect changes in definition or in composition of the universe of institutions being described. In public schools, the enrollments in vocational/technical schools represented an increased share of the total, from 78 percent in 1976 to 96 percent in 1980. But this increase reflects a definitional change that virtually excluded other institutions from the public noncollegiate designation. In private schools, the largest changes were increases for business/commercial schools (up from 36 percent to 45 percent) and trade/arts and design schools (from 13 percent to 19 percent). The shift of many private technical institutes into the higher education group of institutions resulted in a slight decline in the share of private noncollegiate enrollment for the remaining noncollegiate technical institutes.

Vocational training is a major activity of the postsecondary sector. Considerable information is available on vocational programs administered under the Vocational Education Act (VEA) by State Boards of Vocational Education. At the postsecondary level, vocational programs in 1979-80 enrolled over 6.3 million students (entry 4.10). Just under two-thirds of these enrollments were in institutions of higher education, emphasizing the important vocational role now being filled by the higher education sector. Noncollegiate State-approved schools accounted for another 8 percent of the total postsecondary enrollments. Secondary schools also offered postsecondary vocational education; 27 percent of postsecondary vocational enrollments were in other postsecondary schools, facilities that primarily serve secondary students but in these cases provided postsecondary instruction.

The proportion of vocational enrollments by types of schools varied among the instructional program areas. About three-fourths of enrollment for three program areas (distribution, health, and office occupations) was in higher education institutions. An even higher proportion of enrollment in technical programs was in those schools. The largest area in total enrollment, trade and industrial, was more evenly divided among institutional groups: over 15 percent was in State-approved schools and 30 percent was in other postsecondary schools.

Vocational programs are intended to prepare persons to enter occupations. The relationship between vocational education programs and occupations is particularly close for the subset of programs designated as "occupationally specific." These are programs offered at or above grade 11 which purport to impart entry-level job skills for a specific gainful occupation. Excluded are all programs in industrial arts and consumer and homemaking program areas. Consideration of occupationally specific enrollments focuses on those students who would be expected to have the most immediate and planned impact on the labor market.

Almost 96 percent of all postsecondary enrollments in occupationally specific programs were described by sex and race (entry 4.11). The highest enrollments of one sex in occupationally specific programs occurred in the program areas of health and occupational home economics, each with about 81 percent females. Males had the strongest majorities in technical (75 percent) and trade and industrial (78 percent). Highest minority enrollments occurred in the program areas of occupational home economics and office occupations, two areas with high female enrollments. However, the largest program area and the one with the highest percentage male enrollment, trade and industrial, was third in minority enrollment at 25 percent of the total in 1980.

Institutional Finance

The Nation's colleges and universities receive revenues from four types of sources: governmental, private, student, and institutional (entry 4.12). Proportions of revenues coming from each source differ between public and private institutions and among universities, other 4-year institutions, and 2-year institutions. Inspection of income sources for fiscal years 1970 and 1980 suggests which groups of institutions are likely to be affected by changes in particular revenue sources. Most immediately evident is the greater reliance of public institutions upon government funds. Whereas public schools received between 58 and 75 percent of all revenues from government sources in 1980, the corresponding proportions for private schools were between 9 and 30. The major government contributor to public institutions was State governments, which supplied between 40 and 52 percent of revenues for each of the three types of public institutions in 1980.

The Federal government was a source of revenues for both public and private institutions, with institutional level being more closely related than control to proportion of support. Universities received a greater proportion of their revenues from the Federal government than did other 4-year institutions and 2-year institutions. Public universities reported larger total revenues from the Federal government than did private universities in 1980 ($2.6 billion compared to $2.5 billion), but these represented greater proportions of total revenues for the private universities than they did for the public universities (27 percent compared to 16 percent). Much of the private universities' revenues from the Federal government were for specific research; the Nation's private universities conduct proportionally more research than any other group of institutions. Public universities' revenues from the Federal government were provided largely under the provisions of long-standing "Land Grant Acts," such as the Morrill, Nelson, and Bankhead Acts.

Higher education institutions received substantially greater amounts of revenues from government sources in 1980 than they did in 1970. Yet, comparisons of the distributions of revenues by source show that Federal revenues dropped as a percent of the total for universities from 1970 to 1980, from 24 down to 16 percent for public universities, and from 33 to 27 percent for private universities. State governments provided an increasing share of revenues for public universities and for public 2-year institutions.

While governments were major contributors to all groups of higher education institutions, private sources (businesses, foundations, and individuals) were more important to private than to public institutions. Private sources provided only between 1 and 4 percent of revenues for public institutions in fiscal year 1980, but from 8 to 10 percent for private institutions.

For some types of schools, the category of student revenues was the most important single source of revenues. Student sources supplied over half of all revenues for private other 4-year and 2-year institutions. They provided smaller, but nonetheless sizable, portions of revenues for private universities (about one-third) and for all types of public institutions (between 20 and 25 percent). These student sources of revenue were comprised of tuition and fees and auxiliary enterprises. Auxiliary enterprises were room and board, primarily, though they included also income from bookstores and intercollegiate athletics.

The revenues from tuition and fees were more important to private than to public institutions, especially at the 2-year level, where for private colleges tuition and fees in 1980 provided 57 percent of total current funds revenues. For private universities and other 4-year institutions, 27 percent and 43 percent, respectively, of revenues came from tuition and fees. Public institutions, receiving more governmental support, obtained from 12 to 15 percent of their revenues from student tuition and fees.

Income to the colleges and universities from the major Federal student aid programs (discussed in more detail in entry 4.20) was split between two sources of revenues. The Federal governmental source included two of these programs: College Work-Study and the Supplemental Educational Opportunity Grant, which provided funds directly to the educational institutions. For the other Federal student aid programs (Pell Grants, National Direct Student Loan, and Guaranteed Student Loan) the students made the payments to colleges; therefore, these funds (although actually Federal in source) were recorded by the institutions as coming from student sources.

Institutional sources, those that institutions generated for themselves, included revenues from major public service hospitals operated by colleges and universities, endowment income, organized activities related to educational departments, and other sources. These sources contributed highly varied proportions of revenues for the different groups of institutions. In fiscal year 1980, for example, institutional sources provided less than 4 percent of all revenues for public 2-year institutions and over 25 percent for private universities. Income from one of these institutional sources, endowment income, yielded a small portion of total revenues, only 2 percent for all institutions in fiscal year 1980.

Nevertheless, endowments are of particular interest because the market value of these endowments could be regarded as a source of reserves for some institutions. The market value of endowments was higher for private than for public institutions, with about 82 percent of all endowment value held by private institutions (entry 4.13). These endowments were also heavily concentrated in particular institutions; the 10 universities with the largest endowments held nearly $6.5 billion, or about 31 percent of all endowment funds for higher education.

The market value of endowments in 1980 may be compared with values in 1975. However, in considering any changes in dollar amounts over time, the effects of inflation must be recognized. The effects of inflation on individual consumers are most commonly measured by means of the Consumer Price Index (CPI), which calculates the increases in prices for a specified "market basket" of goods and services. However, because colleges and universities purchase a different set of goods, the specially formulated Higher Education Price Index (HEPI) was used for all adjustments to constant-dollar figures in this section.

The value of endowments in current dollars, unadjusted for inflation, increased from 1975 to 1980. But when 1975 amounts were adjusted to constant 1980 dollars, the increase was just seven-tenths of 1 percent. Given the large enrollment increases in higher education during this time, the constant-dollar market value of endowments per student declined for the last 5 years. Thus, endowment would be an inadequate cushion against possible declines from other sources in the future. In fact, if institutions of higher education had to liquidate all endowments in order to support current operations, public institutions considered as a group would have sustained activities for only 1.2 months in 1980. While the group of private institutions had endowments with greater market value, private institutions as a group could have sustained operations for only 10.6 months on liquidated endowments.

Trends in current expenditures by colleges and universities reflected the size and growth of components of higher education. The 10 years ending with fiscal 1980 represented a 37 percent increase in constant-dollar expenditures (entry 4.14). Public institutions experienced more growth than did private institutions, the 45 percent increase in constant-dollar expenditures for all public institutions comparing with a 25 percent increase for all private institutions. The growth of public 2-year schools was primarily responsible for the larger increase for public institutions. Public institutions, enrolling 78 percent of all higher education students in 1980, accounted for 66 percent of total current funds expenditures.

The increases in total expenditures for higher education are put into perspective by expressing expenditures adjusted for inflation on a per full-time-equivalent (FTE) student basis. Expenditures (expressed in constant dollars) per FTE student at public institutions were relatively stable during the decade. Increasing enrollments at public 2-year institutions, which have lower costs per student, may have contributed to this fact by offsetting larger increases at public universities. Private institutions showed almost steady increases in per FTE student expenditures. Slight declines in constant-dollar expenditures per FTE student were reported by public institutions in fiscal years 1972 and 1976, and by private institutions in 1976. By 1980, expenditures per FTE student were $9,140 for private institutions, $5,908 for public institutions.

Higher education institutions differed in their allocation of expenditures, suggesting again that the institutional groups comprising the sector, defined on the basis of governance and level, are distinct from one another. Distributions of total current funds expenditures, calculated on a per-FTE student basis, offer the means of making these comparisons (entry 4.15). Average total expenditure per FTE student for fiscal year 1980 for public 2-year institutions was $2,910, and for private universities was $15,018. A large research component at universities accounted for some of this difference, but even expenditures on instruction differed considerably. Private universities, on the average, also spent the largest amount on instruction per FTE student, $4,021, compared to $2,170 spent by public universities. Private institutions awarded more in scholarships and fellowships than did public institutions at the same level.

In comparing instructional expenditures for vocational programs administered under the Vocational Education Act (VEA) across the three postsecondary groups of institutions, it may be noted that institutions of higher education reported the largest proportion of the total for almost all of the instructional program areas (entry 4.16). Only 5 percent of the instructional expenditures for vocational programs in higher education was supplied by the Federal government through VEA funds.

At least 80 percent of total direct instructional expenditures for five of the nine program areas was spent at institutions of higher education: distribution, health, occupational home economics, office occupations, and technical. State-approved institutions accounted for less than 10 percent of postsecondary direct instructional expenditures for all program areas except trade and industrial, for which they had 18 percent of the total. However, for each program area, this group of institutions had a higher percent of their funds from Federal sources than did institutions of higher education. For all program areas combined, 13 percent of funds were from the Federal government, more than twice the percentage for higher education. "Other postsecondary" institutions as a group spent more in direct instructional expenditures than did State-approved institutions. These institutions reported the same percent of funds from Federal sources for all program areas, 13 percent, as State-approved institutions.

Student Finance

It was noted earlier in the chapter that student tuition and fees play a substantial role in postsecondary education institutional finance, particularly in the private sector. In turn, students' ability to pay in large part determines their access to postsecondary education. Between 1970 and 1980, student charges (room, board, tuition and fees) at the Nation's colleges and universities doubled, but at the same time median family income doubled as well (entry 4.17). As a result, the ratio of student charges to median family income varied only slightly during that time and, at public universities, even declined by more than 3 percentage points, from 15 percent in 1970 to just under 13 percent in 1980.

But ability to pay varies for different groups. Median income for Hispanic families in 1980 was about 33 percent lower than that of white families and for black families was about 42 percent lower. Thus, if students' access to postsecondary education depended solely on their families' ability to pay, the access of minorities would be seriously limited.

The prominence of the nationwide policy discussions about support for postsecondary education lends particular interest to analyses of recent data on parents' views and actions on funding. A 1980 survey obtained parents' views on who should have the main responsibility for the cost of education beyond high school, and also asked the parents what actions they had taken to have some money for their children's postsecondary education.

On the main responsibility for the cost of education beyond high school, parents were more likely to respond that it was their responsibility as opposed to students' or governments' responsibility (entry 4.18). Responses tabulated by income level and racial/ethnic group show that there were larger differences by income: at the lowest income level, this response was selected by 41 percent of the parents; at the middle level, by 49 percent; and at the highest level, by a majority of 58 percent. Forty-four percent of Hispanic and of black parents compared to 50 percent of white parents held this view. As was seen in entry 4.17, the median income of white families is well above the medians of the minority families.

For each of the three income groups, the order of preference in allocating the main responsibility was: first to parents, then to students, to the Federal government, and last to State or local governments. Hispanics gave second place to State or local governments, while blacks gave second place to the Federal government.

A related question asked whether or not the parents had done anything specific in order to have some money for the child's education beyond high school. Parents were counted as having done "something specific" if they responded "Yes" to such actions listed in the question as: started a savings account, bought an insurance policy or U.S. Savings Bonds, made investments, set up a trust fund, or started working or took an additional job. Parents' answers to this and to the "responsibility" question were compared on the basis of the extent to which parents' own actions to save and/or earn money for a child's postsecondary education were consistent with their views as to "the main responsibility" to pay. Only those parents who had also stated that they wanted some postsecondary education for their son or daughter were included in the analysis (entry 4.19). Of these parents, 45 percent had done something specific, as compared with 58 percent of those who had also responded that parents had the main responsibility. The percentage of parents who had done something specific to have money for postsecondary education varied directly according to: (1) the type of postsecondary education they wanted their son or daughter to have; (2) income level; and (3) racial/ethnic group. Parents wanting vocational, trade, or business school for their children were less likely to take specific action than were parents anticipating expenses for college. Even in the lowest income category over a third of the parents anticipating college costs had taken specific action to have some money.

Students and their families who have been unable to pay all the costs of a postsecondary education have had access to many sources of financial aid. Scholarships, fellowships, and loans have been made available by the postsecondary institutions themselves, by private individuals, and by a variety of organizations of individuals throughout the Nation. Local, State, and Federal governments have funded grants, loans, and work-study programs as well as fellowships in scientific studies and other areas.

The Federal government has played an increasing role in assuring student access to postsecondary education. For fiscal year 1981, $5.4 billion was appropriated for the five major Federal programs of student financial aid, compared to $1.4 billion in 1973 (entry 4.20). These programs encompassed loan, grant, and work-study programs. The figures used here and throughout this discussion are calculations of 3-year moving averages as distinguished from the actual annual appropriation amounts. This type of calculation was performed to aid in interpreting the data more realistically, since portions of annual appropriations could be used in adjacent years; otherwise, some of the variations in actual amounts could be misleading.

The Pell Grant program, formerly known as Basic Educational Opportunity Grants (BEOG), was the largest of the five programs between 1974 and 1981. The Guaranteed Student Loan (GSL) program was the second largest after 1974, and almost equaled the Pell Grant in 1981. The three other major programs were the College Work-Study (CWS), the Supplemental Educational Opportunity Grant (SEOG), and the National Direct Student Loan (NDSL) programs. Other programs that were relatively small were the State Student Incentive and Health Education Assistance Loan programs.

The Pell Grant program had appropriations of over $2 billion for each fiscal year 1978 through 1981. Guaranteed Student Loan passed the $2 billion mark in 1981. The only program that was smaller in 1981 than in 1974 was the National Direct Student Loan; the decrease was more than offset by expansion of the Guaranteed Student Loan. The College Work-Study and Supplemental Educational Opportunity Grant programs increased modestly during the period, but were far outdistanced by rapid climbs in the Pell Grant and Guaranteed Student Loan.

Economic constraints of the 1980's are expected to limit and restrict this source of student aid in the foreseeable future. The increases in these programs over the past four years, particularly in Pell Grants and Guaranteed Student Loans, have been due in large part to the Middle Income Students' Assistance Act passed in 1978 (see NCES, *Condition of Education*, 1981 for a discussion of this legislation).

Table 4.1

Population[1] of Adults 18 Years Old and Over, by Age Group: 1970 to 1990

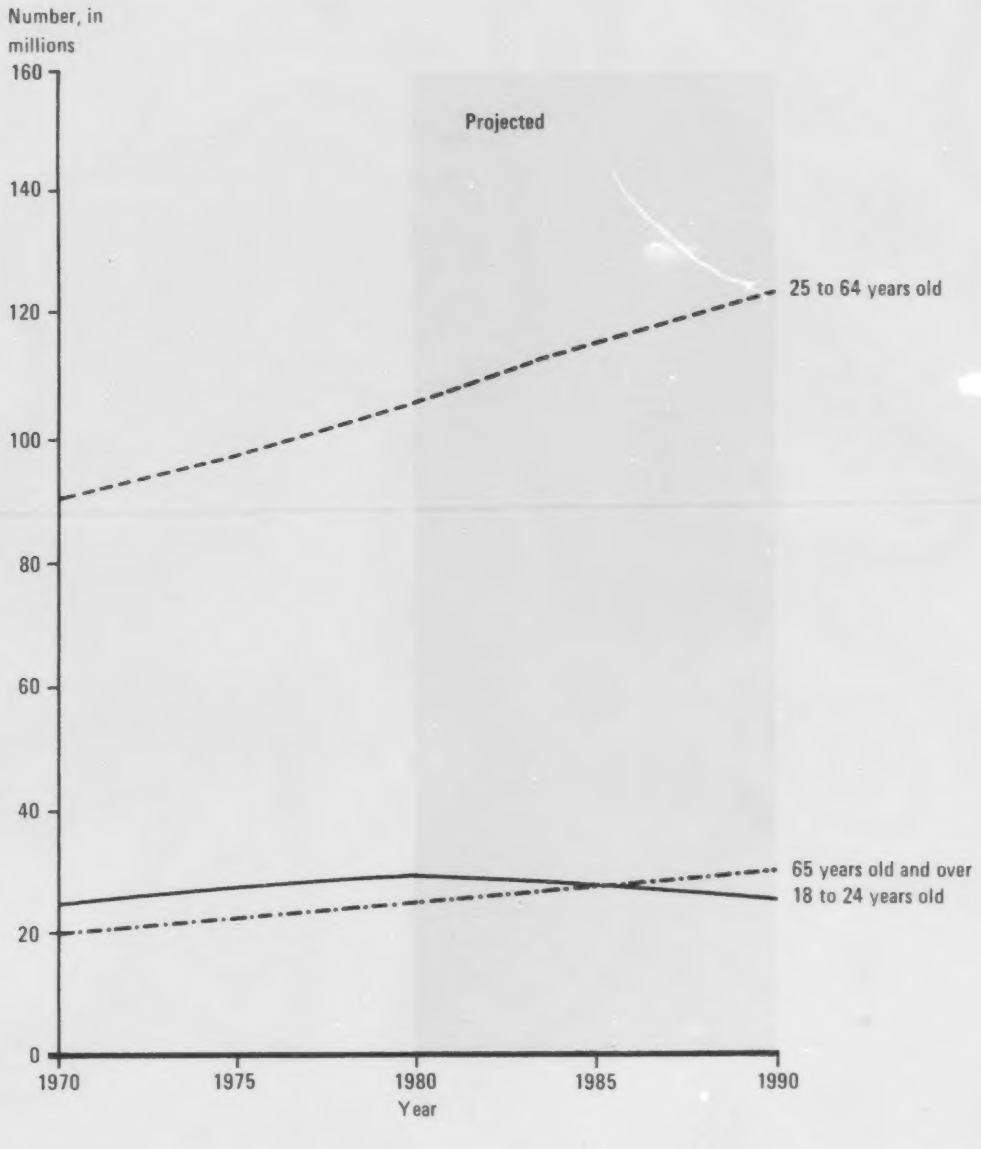
Age Group	Estimated		Projected		
	1970	1975	1980	1985	1990
	Number, in Thousands				
18 to 24	**24,687**	**27,604**	**29,463**	**27,853**	**25,149**
18 to 21	14,707	16,484	17,117	15,442	14,507
22 to 24	9,980	11,120	12,346	12,411	10,642
25 to 64	**90,410**	**97,280**	**105,789**	**115,429**	**123,765**
25 to 29	13,718	16,932	18,930	20,581	20,169
30 to 34	11,576	13,987	17,242	19,278	20,917
35 to 39	11,151	11,625	14,033	17,274	19,261
40 to 44	11,991	11,191	11,688	14,102	17,331
45 to 49	12,147	11,789	11,030	11,526	13,889
50 to 54	11,163	11,979	11,668	10,931	11,422
55 to 59	9,998	10,536	11,401	11,122	10,416
60 to 64	8,666	9,241	9,797	10,615	10,360
65 and over	**20,087**	**22,420**	**24,927**	**27,305**	**29,824**

[1] Includes Armed Forces overseas.

Source: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports,* Series P-25, No. 721 (1970 and 1975), No. 704 (1980 to 1990).

Chart 4.1

Population of Selected Age Groups in the United States



The 18- to 24-year-old age group, the traditional mainstay of higher education enrollments, will decrease during the 1980's, but the population aged 25 to 64 years is projected to increase. Increased enrollment of older students could serve to counteract the impact of declining enrollment of 18- to 24-year-olds.

Table 4.2

Enrollment in Institutions of Higher Education, by Sex, Age, and Part-Time Attendance Status: Fall 1970 to Fall 1990

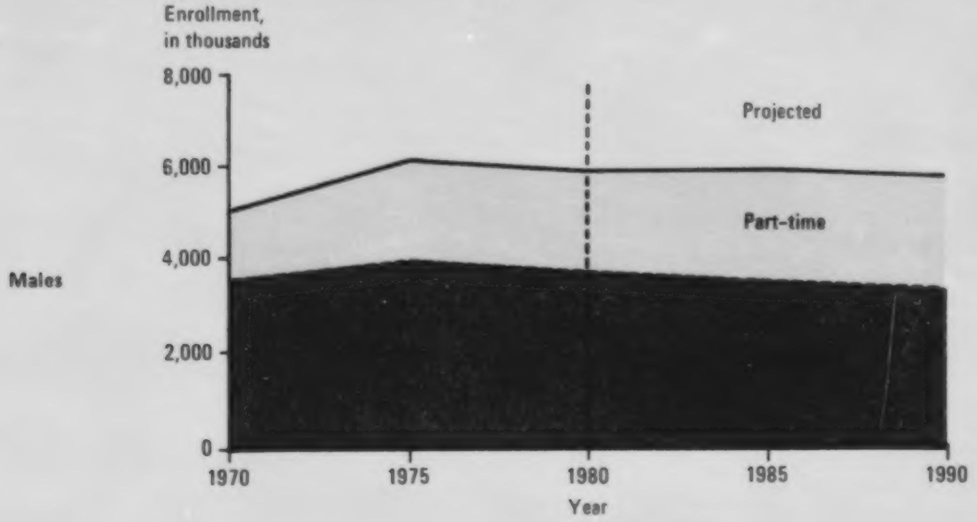
Sex and Age	Estimated						Projected[1]			
	1970		1975		1980		1985		1990	
	Total, in Thousands	Percent Part-Time	Total, in Thousands	Percent Part-Time	Total, in Thousands	Percent Part-Time	Total, in Thousands	Percent Part-Time	Total, in Thousands	Percent Part-Time
Both sexes	8,581	32.2	11,185	38.8	12,097	41.3	12,174	44.3	12,101	46.0
16 and 17 years	258	6.6	278	12.9	247	13.0	218	11.0	201	10.9
18 and 19 years	2,599	7.5	2,785	9.9	2,899	11.1	2,418	11.2	2,375	11.4
20 and 21 years	1,880	12.4	2,243	17.4	2,424	15.0	2,207	15.9	1,995	15.9
22 to 24 years	1,457	39.5	1,754	42.5	1,988	41.0	2,071	37.6	1,865	35.7
25 to 29 years	1,075	62.1	1,774	61.0	1,873	67.3	2,101	64.7	2,091	63.7
30 to 34 years	487	79.5	967	71.1	1,243	78.7	1,340	77.8	1,453	77.8
35 years and over	824	83.7	1,384	81.4	1,422	86.4	1,821	86.1	2,123	86.1
Males	5,044	30.5	6,149	36.1	5,874	37.2	5,917	40.5	5,770	42.4
16 and 17 years	129	3.9	126	13.5	99	15.2	90	13.3	82	12.2
18 and 19 years	1,349	6.2	1,397	9.2	1,375	10.7	1,159	10.5	1,140	10.5
20 and 21 years	1,095	9.6	1,245	15.4	1,260	12.3	1,156	14.0	1,044	14.0
22 to 24 years	964	32.6	1,048	34.5	1,053	35.8	1,066	34.1	913	34.2
25 to 29 years	783	58.2	1,123	57.8	994	61.9	1,130	60.4	1,107	60.3
30 to 34 years	308	76.6	557	67.0	576	77.6	642	75.4	695	75.4
35 years and over	415	81.9	654	76.8	507	84.8	674	84.6	788	84.5
Females	3,537	34.6	5,036	42.1	6,223	45.2	6,257	47.9	6,331	49.3
16 and 17 years	129	9.3	152	12.5	149	11.4	128	9.4	119	10.1
18 and 19 years	1,250	8.8	1,388	10.6	1,524	11.4	1,259	11.8	1,234	12.2
20 and 21 years	785	16.3	998	19.8	1,165	17.9	1,051	18.1	951	18.1
22 to 24 years	493	53.1	706	54.4	925	47.4	1,005	41.2	952	37.2
25 to 29 years	292	72.6	651	66.5	879	73.5	971	69.7	984	67.4
30 to 34 years	179	84.4	410	76.8	667	79.6	698	80.1	758	80.1
35 years and over	409	85.6	730	85.6	915	87.3	1,147	87.0	1,334	87.1

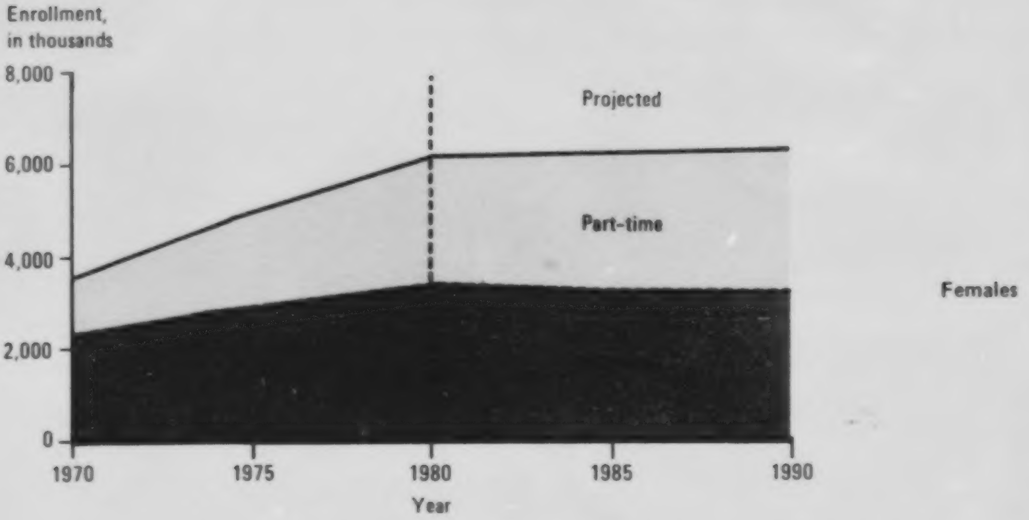
[1] Intermediate alternative projection by the National Center for Education Statistics.

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics to 1990-91*, forthcoming.

Anticipated Enrollment Patterns in Higher Education





The increase in part-time enrollment in higher education from 1970 to 1980 was primarily due to the enrollment patterns of older students, whose numbers increased substantially. Anticipated growth in part-time enrollment is expected to offset declines in full-time enrollment and keep total enrollment in 1990 at a level almost as high as that projected for 1985.

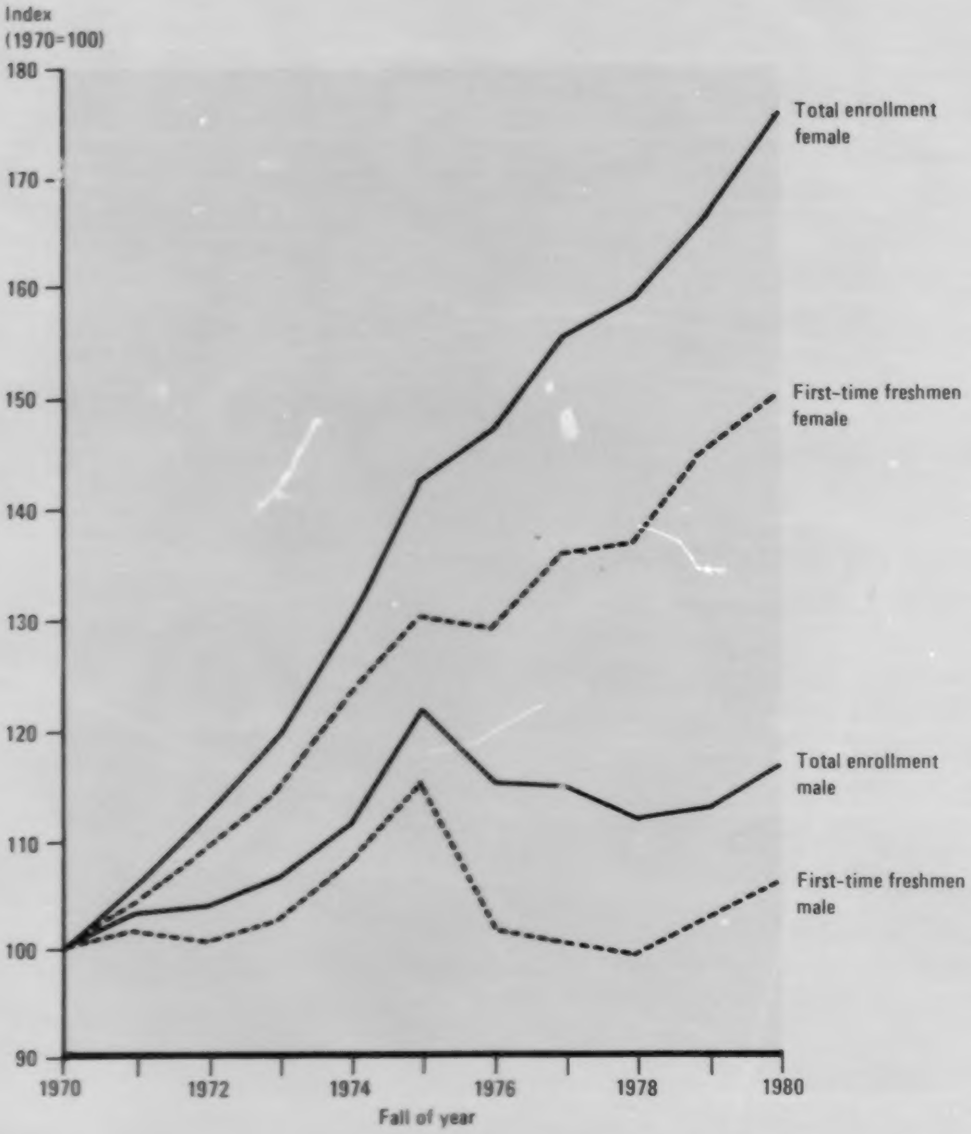
Table 4.3

Enrollment of First-Time Freshmen and Total Enrollment in Institutions of Higher Education, by Sex: Fall 1970 to Fall 1980

Fall of Year	Total Enrollment		First-Time Freshmen	
	Male	Female	Male	Female
1970	5,043,642	3,537,245	1,151,960	911,347
1971	5,207,004	3,741,640	1,170,518	948,500
1972	5,238,757	3,976,103	1,157,501	995,277
1973	5,371,052	4,231,071	1,182,173	1,043,868
1974	5,622,429	4,601,300	1,243,790	1,121,971
1975	6,148,997	5,035,862	1,327,935	1,187,220
1976	5,810,828	5,201,309	1,170,326	1,176,688
1977	5,789,016	5,496,771	1,155,856	1,238,570
1978	5,640,998	5,619,094	1,141,777	1,247,850
1979	5,682,877	5,887,022	1,179,846	1,323,050
1980	5,874,374	6,222,521	1,218,961	1,368,683
		Indices (1970 = 100)		
1970	100.0	100.0	100.0	100.0
1971	103.2	105.8	101.6	104.1
1972	103.9	112.4	100.5	109.2
1973	106.5	119.6	102.6	114.5
1974	111.5	130.1	108.0	123.1
1975	121.9	142.4	115.3	130.3
1976	115.2	147.0	101.6	129.1
1977	114.8	155.4	100.3	135.9
1978	111.8	158.9	99.1	136.9
1979	112.7	166.4	102.4	145.2
1980	116.5	175.9	105.8	150.2

Source: U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education,* various years.

Growth in Enrollment of First-Time Freshmen and Total Enrollment in Higher Education, by Sex



First-time and total enrollments of females grew faster than those of males between 1970 and 1980. Total enrollment of females increased each year during the period, as did female first-time enrollment except in 1976. First-time and total enrollments of males peaked in 1975, then declined for three years until they began to rise again in 1979.

Table 4.4

Population, High School Graduates, and College Enrollment of 18- to 24-Year-Olds, by Racial/Ethnic Group: 1970, 1975, and 1980

Racial/Ethnic Group and Year	Population	High School Graduates	College Enrollment	High School Graduates as a Percent of Population	College Enrollment as a Percent of Population	College Enrollment as a Percent of High School Graduates
	Numbers, in Thousands			Percent		
White						
1970	19,608	15,960	5,305	81.4	27.1	33.2
1975	22,703	18,883	6,116	83.2	26.9	32.4
1980	23,975	19,787	6,334	82.5	26.4	32.0
Black						
1970	2,692	1,602	416	59.5	15.5	26.0
1975	3,213	2,081	665	64.8	20.7	32.0
1980	3,555	2,479	688	69.7	19.4	27.8
Hispanic						
1970	–	–	–	–	–	–
1975	1,446	832	295	57.5	20.4	35.4
1980	1,962	1,054	315	53.7	16.1	29.9

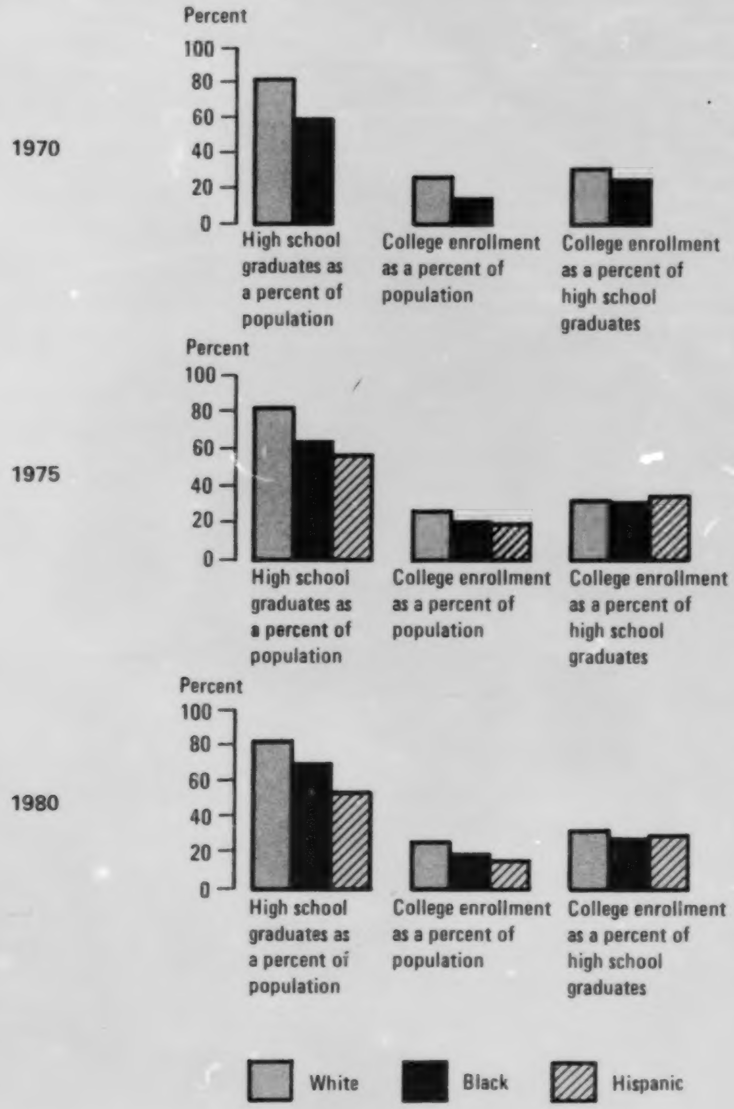
– Not available.

Note: Not all races are represented and categories are not discrete, in that a person in the Hispanic ethnic group may also be counted in a racial group.

Source: U.S. Department of Commerce, *Current Population Reports,* "School Enrollment-Social and Economic Characteristics of Students", Series P-20, Nos. 222, 303, 362.

Chart 4.4

High School Graduates and College Enrollment of 18- to 24-Year-Olds, by Racial/Ethnic Group



The ratios of high school graduates and college enrollment to the population for whites, blacks, and Hispanics differed to a larger extent than the ratio of college enrollment to high school graduates for these populations.

Table 4.5

Fall Enrollment[1] in Higher Education, by Racial/Ethnic Group and Enrollment Level: 1980, with Percent Change From 1978

Category[2]	Total[3]	Level: Undergraduate	Level: Graduate	Level: First-Professional
		Number in 1980		
Total	12,087,625	9,262,820	1,096,455	276,844
Racial/ethnic group:				
White[4]	9,831,493	7,465,722	898,290	247,271
Black[4]	1,106,445	932,055	59,929	12,822
Hispanic	471,686	390,440	24,257	6,534
American Indian/Alaskan Native	85,798	68,708	4,381	1,191
Asian or Pacific Islander	286,408	214,989	23,475	6,124
Nonresident alien	305,795	190,906	86,123	2,902
		Percent Change, 1978 to 1980		
Total	8	8	2	9
Racial/ethnic group:				
White[4]	7	7	-1	8
Black[4]	5	5	-3	12
Hispanic	13	12	15	22
American Indian/Alaskan Native	10	12	16	11
Asian or Pacific Islander	22	21	14	28
Nonresident alien	21	23	17	-5

[1] Excludes enrollment not reported by racial/ethnic group. Of a total of 12,096,895 students in the 50 States and D.C., only 9,270, or less than 1 percent, were not classified in one of the groups.

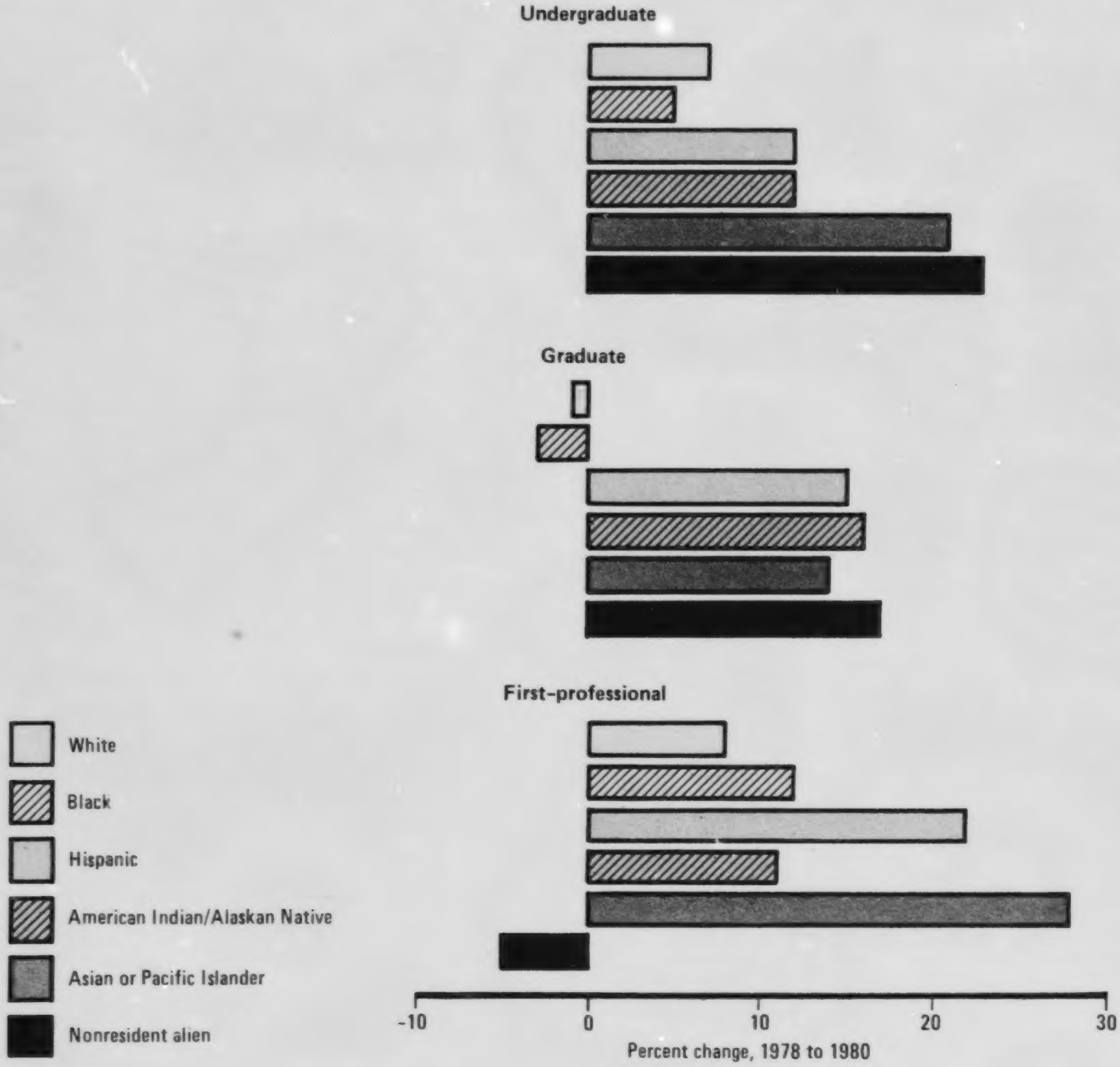
[2] Students classified in the five racial/ethnic groups are United States citizens or permanent residents in the U.S. Nonresident aliens, not classified by racial/ethnic group, constitute a separate category.

[3] Total may exceed sum of enrollment by level because it includes students classified by racial/ethnic group but who are not candidates for a degree or other formal award, and hence could not be classified by level.

[4] Non-Hispanic.

Source: U.S. Department of Education, National Center for Education Statistics, unpublished tabulations from the Higher Education General Information Survey.

Change in Higher Education Enrollment for Racial/Ethnic Groups, by Enrollment Level: 1978 to 1980



Higher education enrollment increased for all racial/ethnic groups at most levels from 1978 to 1980. The exceptions were slight decreases in white and black enrollments at the graduate level and a small decrease in the number of nonresident aliens enrolled at the first-professional level.

Table 4.6

Number of Postsecondary Institutions[1], by Control and Type of Institution: 1976, 1978, and 1980

Type and Control of Institution	Number			Percentage Distributions		
	1976	1978	1980	1976	1978	1980
Total	11,409	11,026	11,000	100.0	100.0	100.0
Institutions of higher education:						
Universities and other 4-year institutions	1,928	1,962	1,981	16.9	17.8	18.0
2-year junior and community colleges	1,147	1,211	1,289	10.1	11.0	11.7
Noncollegiate schools:						
Technical institutes	300	235	107	2.6	2.1	1.0
Vocational/technical schools	557	618	689	4.9	5.6	6.3
Business/commercial schools	1,265	1,301	1,388	11.1	11.8	12.6
Cosmetology/barber schools	2,272	2,163	2,128	19.9	19.6	19.3
Flight schools	1,332	1,064	928	11.7	9.6	8.4
Trade/arts and design schools	1,018	1,004	1,023	8.9	9.1	9.3
Health-related schools	1,419	1,276	1,243	12.4	11.6	11.3
Other schools	171	192	224	1.5	1.7	2.0
Public	2,406	2,401	2,406	100.0	100.0	100.0
Institutions of higher education:						
Universities and other 4-year institutions	558	560	561	23.2	23.3	23.3
2-year junior and community colleges	909	928	949	37.8	38.7	39.4
Noncollegiate schools:						
Technical institutes	168	122	2	7.0	5.1	.1
Vocational/technical schools	453	506	591	18.8	21.1	24.6
Business/commercial schools	5	4	3	.2	.2	.1
Cosmetology/barber schools	7	0	3	.3	0	.1
Flight schools	5	5	1	.2	.2	0
Trade/arts and design schools	18	14	8	.7	.6	.3
Health-related schools	283	261	288	11.8	10.9	12.0
Other schools	0	1	0	0	0	0
Private	9,003	8,625	8,594	100.0	100.0	100.0
Institutions of higher education:						
Universities and other 4-year institutions	1,370	1,402	1,420	15.2	16.3	16.5
2-year junior and community colleges	238	283	340	2.6	3.3	4.0
Noncollegiate schools:						
Technical institutes	132	113	105	1.5	1.3	1.2
Vocational/technical schools	104	112	98	1.2	1.3	1.1
Business/commercial schools	1,260	1,297	1,385	14.0	15.0	16.1
Cosmetology/barber schools	2,265	2,163	2,125	25.2	25.1	24.7
Flight schools	1,327	1,059	927	14.7	12.3	10.8
Trade/arts and design schools	1,000	990	1,015	11.1	11.5	11.8
Health-related schools	1,136	1,015	955	12.6	11.8	11.1
Other schools	171	191	224	1.9	2.2	2.6

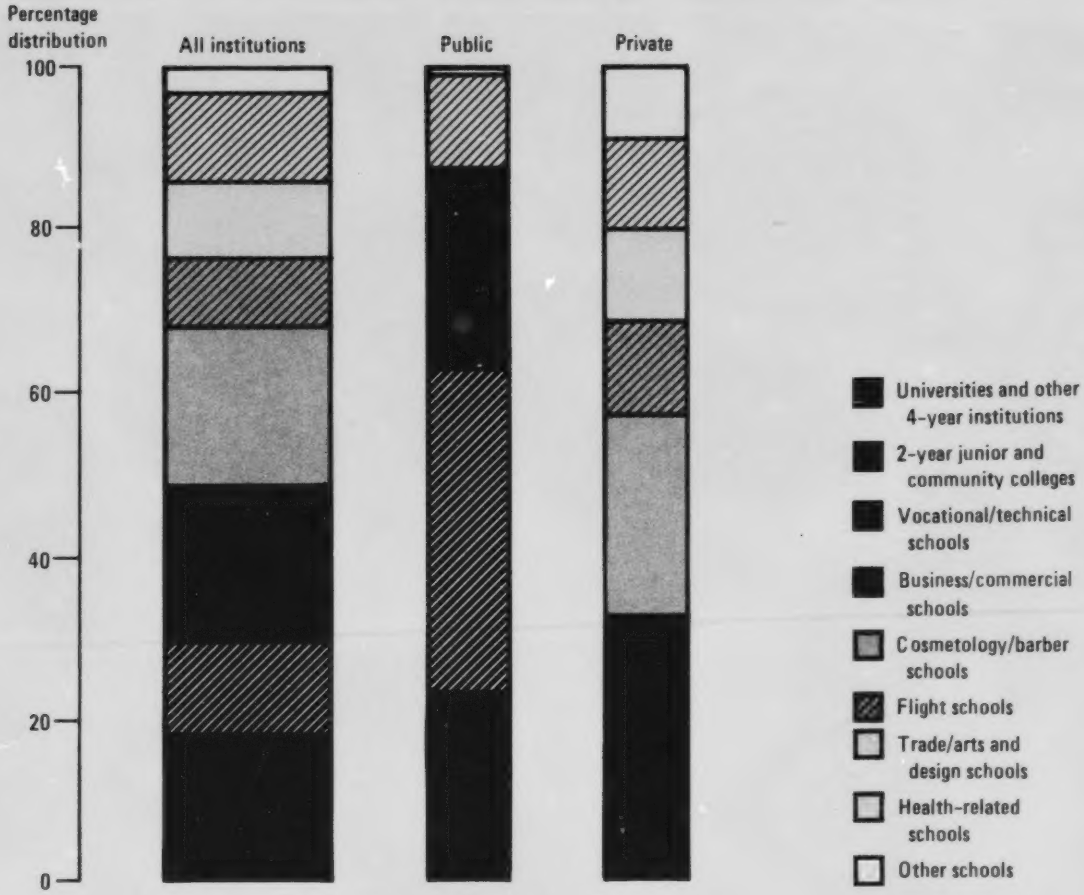
[1] Includes 50 States, the District of Columbia and outlying areas.

Notes: Details may not add to totals because of rounding. The table includes institutions of higher education and noncollegiate postsecondary schools. Schools meeting the accreditation standards for inclusion in the NCES *Education Directory. Colleges & Universities* offer "at least a one-year program of college-level studies leading toward a degree," and are classified as "college-level," i.e., as institutions of higher education. In 1980, technical institutes accredited by the National Association of Trade and Technical Schools (NATTS) were recognized for the first time in the *Directory*. Hence, 77 of the private noncollegiate institutions listed in this table under the descriptor "Technical institutes" for 1978 are counted as college-level in the appropriate 4-or 2-year institutional category in 1980.

Sources: U.S. Department of Education, National Center for Education Statistics, *Education Directory: Colleges and Universities*, various years, and Directory of *Postsecondary Schools with Occupational Programs*, 1978 and unpublished tabulations.

Chart 4.6

Postsecondary Education Institutions in 1980



NOTE: Any type of institution making up less than 5 percent of a group or subgroup is combined into the "other" category.

Of the approximately 11,000 institutions offering some type of postsecondary education in 1980, almost 3,300 were at the college level. The other 7,700 were noncollegiate postsecondary schools offering occupational programs. The composition of the public and private sectors differed markedly.

Table 4.7

Enrollment[1] in Institutions of Higher Education, by Level and Control of Institution: 1976, 1978, and 1980

Level and Control	Numbers, in Thousands			Percentage Distribution			Percentage Distribution by Control		
	1976	1978	1980	1976	1978	1980	1976	1978	1980
Total	11,121.4	11,391.9	12,234.7	100.0	100.0	100.0	100.0	100.0	100.0
Universities and other 4-year institutions	7,204.8	7,327.1	7,678.5	64.8	64.3	62.8	64.8	64.3	62.8
2-year junior and community colleges	3,916.6	4,064.8	4,556.2	35.2	35.7	37.2	35.2	35.7	37.2
Public	8,712.6	8,843.2	9,518.1	78.3	77.6	77.8	100.0	100.0	100.0
Universities and other 4-year institutions	4,946.7	4,960.4	5,175.5	44.5	43.5	42.3	56.8	56.1	54.4
2-year junior and community colleges	3,765.9	3,882.8	4,342.6	33.9	34.1	35.5	43.2	43.9	45.6
Private	2,408.8	2,548.7	2,716.6	21.7	22.4	22.2	100.0	100.0	100.0
Universities and other 4-year institutions	2,258.1	2,366.7	2,503.0	20.3	20.8	20.5	93.7	92.9	92.1
2-year junior and community colleges	150.7	182.0	213.6	1.4	1.6	1.7	6.3	7.1	7.9

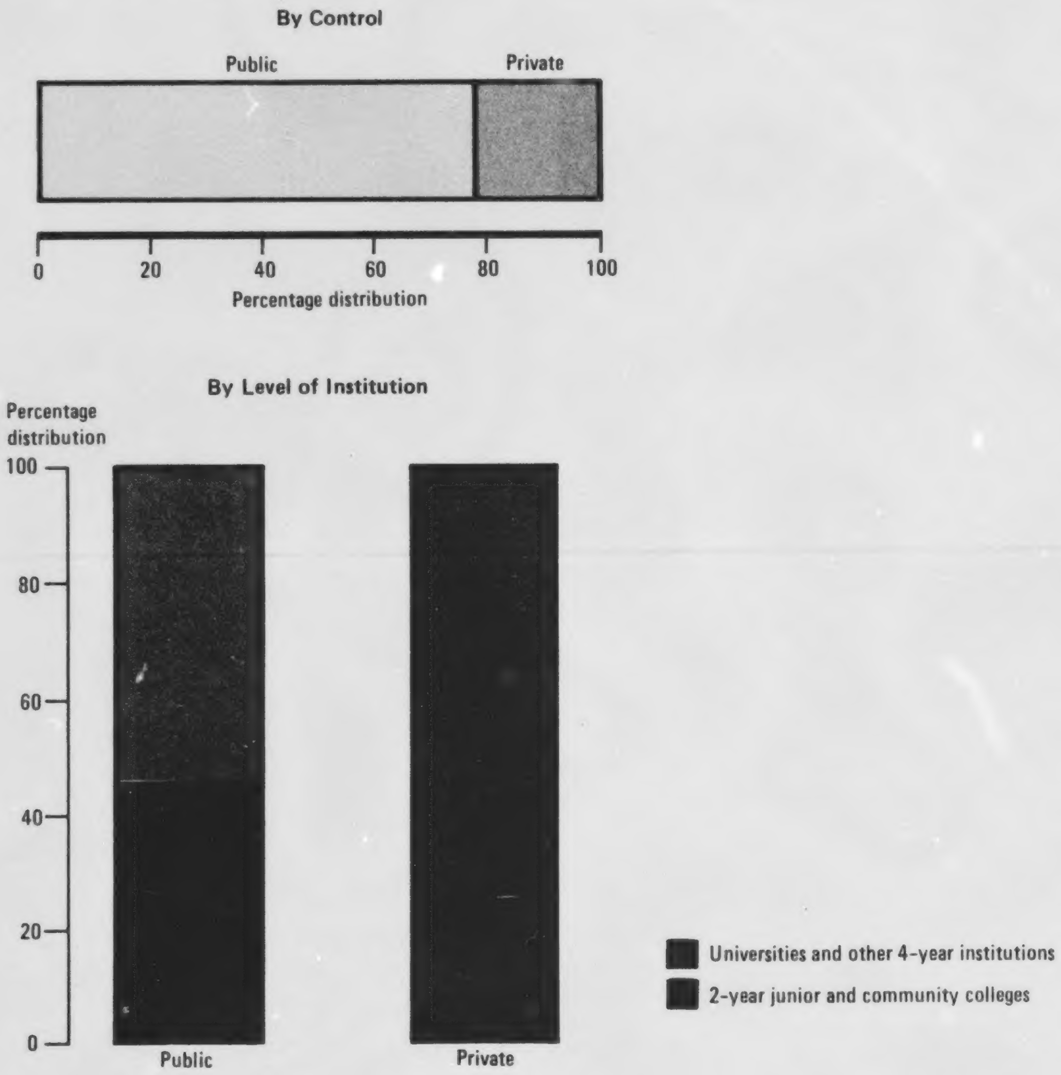
[1] Includes enrollment in the 50 States, the District of Columbia and outlying areas.

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*, 1978, 1979, and unpublished tabulations from the 1980 Higher Education General Information Survey.

Chart 4.7

Enrollment in Collegiate Postsecondary Institutions in Fall 1980



More than three-fourths of higher education enrollment was in public institutions. The enrollment in public schools was almost evenly divided between 4-year institutions and 2-year colleges, while more than 90 percent of the enrollment in private schools was in 4-year institutions.

Table 4.8

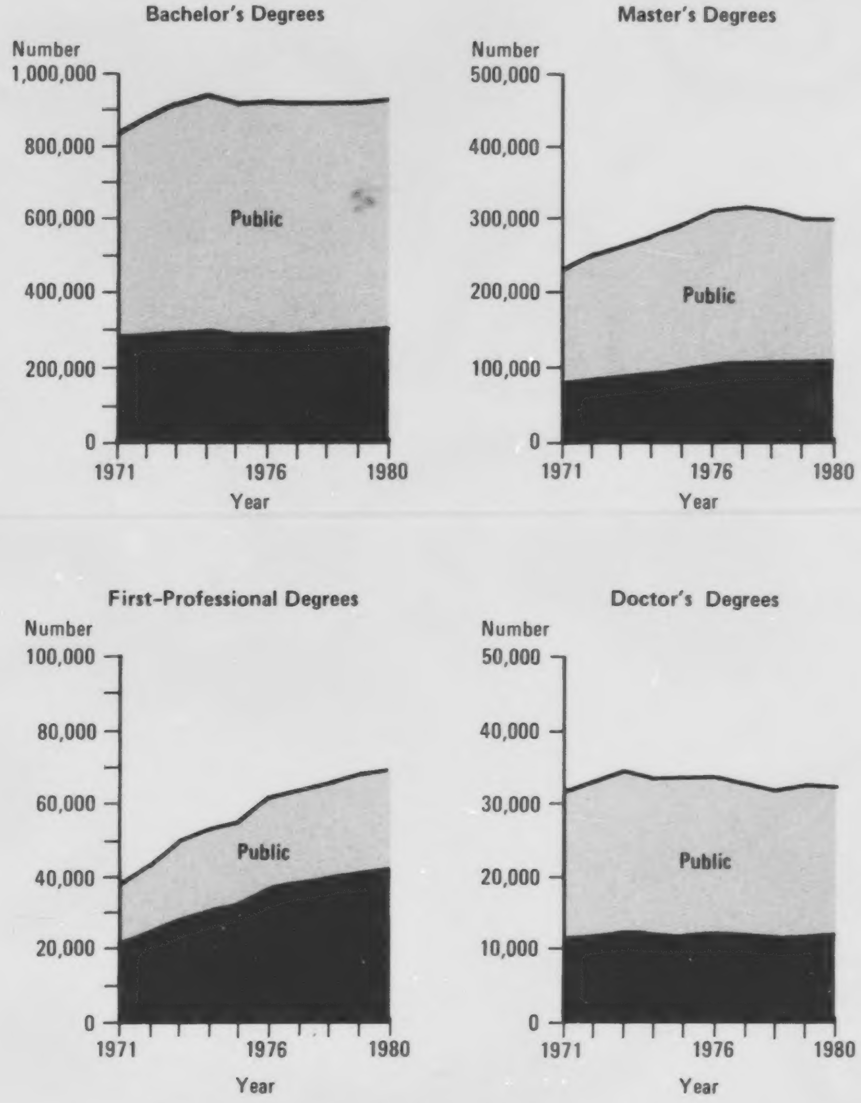
Earned Degrees Conferred by Institutions of Higher Education, by Level of Degree and Control of Institution: 1971 to 1980

Year	Total	Public	Private	Percent Private	Total	Public	Private	Percent Private
		Bachelor's Degrees				Master's Degrees		
1971	839,730	557,996	281,734	33.6	230,509	151,603	78,906	34.2
1972	887,273	599,615	287,658	32.4	251,633	167,075	84,558	33.6
1973	922,362	630,899	291,463	31.6	263,371	174,405	88,966	33.8
1974	945,776	651,544	294,232	31.1	277,033	184,632	92,401	33.4
1975	922,933	634,785	288,148	31.2	292,450	193,804	98,646	33.7
1976	925,746	635,161	290,585	31.4	311,771	206,298	105,473	33.8
1977	919,549	630,463	289,086	31.4	317,164	208,901	108,263	34.1
1978	921,204	627,903	293,301	31.8	311,620	202,099	109,521	35.1
1979	921,390	621,666	299,724	32.5	301,079	192,016	109,063	36.2
1980	929,417	624,084	305,333	32.9	298,081	187,499	119,582	37.1
		Doctor's Degrees				First-Professional Degrees		
1971	32,107	20,788	11,319	35.3	37,946	16,139	21,807	57.5
1972	33,363	21,776	11,587	34.7	43,411	18,521	24,890	57.3
1973	34,777	22,357	12,420	35.7	50,018	21,872	28,146	56.3
1974	33,816	21,810	12,006	35.5	53,816	23,208	30,608	56.9
1975	34,083	22,176	11,907	34.9	55,916	23,612	32,304	57.8
1976	34,064	21,751	12,313	36.1	62,649	25,766	36,883	58.9
1977	33,232	21,229	12,003	36.1	64,359	26,344	38,015	59.1
1978	32,131	20,456	11,675	36.3	66,581	27,097	39,484	59.3
1979	32,730	20,817	11,913	36.4	68,848	27,785	41,063	59.6
1980	32,615	20,608	12,007	36.8	70,131	27,942	42,189	60.2

Source: U.S. Department of Education, National Center for Education Statistics, *Earned Degrees Conferred: An Examination of Recent Trends,* 1982.

Chart 4.8

Earned Degrees Conferred by Institutions of Higher Education



The majority of higher education degrees at the bachelor's, master's and doctor's levels were earned at public institutions, but the majority of first professional degrees earned in 1980 were granted by private institutions. While the percentage of degrees earned remained almost constant by control of institution, from 1971 to 1980 slight increases in the shares earned at private institutions were recorded for master's, doctor's and first professional degrees.

Table 4.9

Enrollment[1] in Noncollegiate Postsecondary Institutions, by Control and Type: 1976, 1978, and 1980

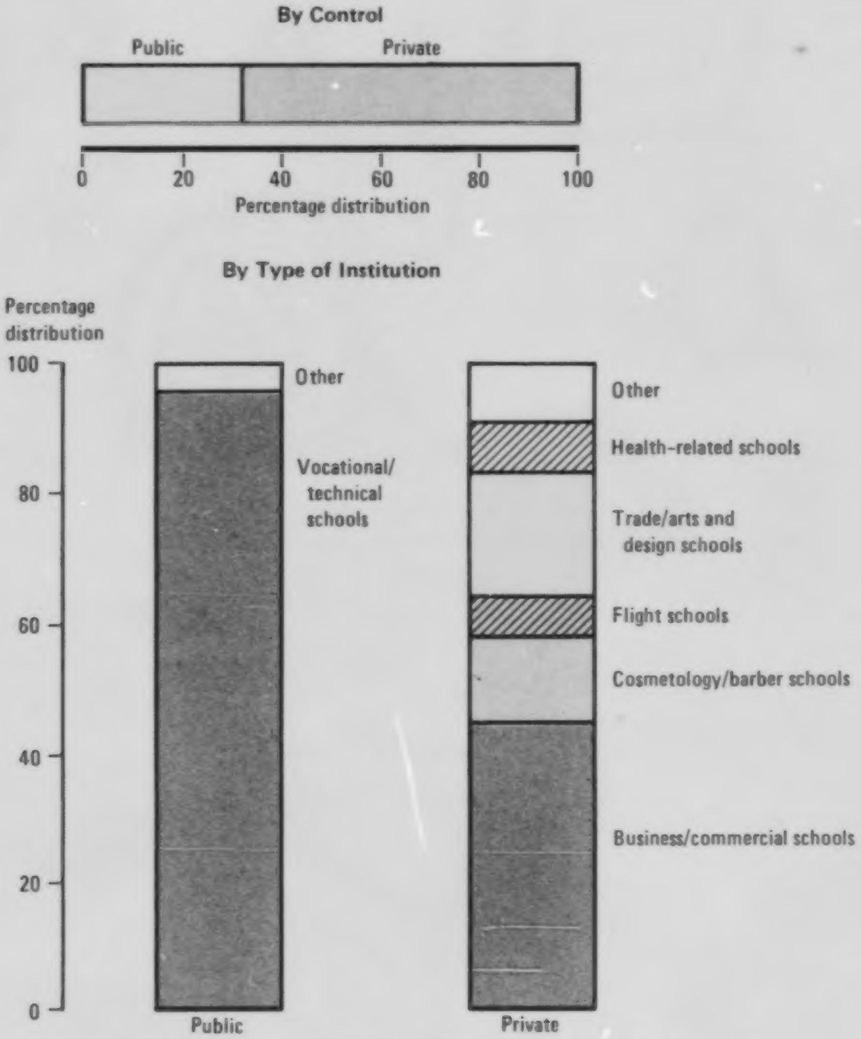
Type and Control of Institution	Number, in Thousands			Percentage Distributions			Percentage Distributions, by Control		
	1976	1978	1980	1976	1978	1980	1976	1978	1980
Total	1,399.1	1,495.2	1,623.9	100.0	100.0	100.0	100.0	100.0	100.0
Technical institutes	92.1	34.5	35.3	6.6	2.3	2.2	6.6	2.3	2.2
Vocational/technical schools	495.0	478.4	522.1	35.4	32.0	32.2	35.4	32.0	32.2
Business/commercial schools	339.2	440.5	496.6	24.2	29.5	30.5	24.2	29.5	30.5
Cosmetology/barber schools	133.0	132.4	148.5	9.5	8.9	9.1	9.5	8.9	9.1
Flight schools	72.9	63.3	67.4	5.2	4.2	4.2	5.2	4.2	4.2
Trade/arts and design schools	158.0	195.9	213.2	11.3	13.1	13.1	11.3	13.1	13.1
Health-related schools	71.1	103.8	103.2	5.1	6.9	6.4	5.1	6.9	6.4
Other schools	37.8	46.4	37.7	2.7	3.1	2.3	2.7	3.1	2.3
Public	468.4	451.8	518.0	33.5	30.2	31.9	100.0	100.0	100.0
Technical institutes	41.5	11.0	–	3.0	.7	–	8.9	2.4	–
Vocational/technical schools	367.3	405.2	496.5	26.3	27.1	30.6	78.4	89.7	95.8
Business/commercial schools	.8	1.3	1.6	.1	.1	.1	.3	.3	.3
Cosmetology/barber schools	.9	–	.1	.1	–	–	.3	–	.0
Flight schools	5.5	.4	.1	.4	.0	–	1.2	.1	.0
Trade/arts and design schools	34.5	4.0	3.5	2.5	.3	.2	7.4	.9	.7
Health-related schools	9.8	14.5	16.2	.7	1.0	1.0	2.1	3.2	3.1
Other schools	8.1	15.4	–	.6	1.0	–	1.8	3.4	–
Private	930.7	1,043.4	1,105.9	66.5	69.8	68.1	100.0	100.0	100.0
Technical institutes	50.6	23.5	35.3	3.6	1.6	2.2	5.4	2.3	3.2
Vocational/technical schools	127.7	73.2	25.5	9.1	4.9	1.6	13.7	7.0	2.3
Business/commercial schools	338.4	439.2	495.0	24.2	29.4	30.5	36.4	42.1	44.8
Cosmetology/barber schools	132.1	132.4	148.4	9.4	8.9	9.1	14.2	12.7	13.4
Flight schools	67.4	62.9	67.4	4.8	4.2	4.2	7.2	6.0	6.1
Trade/arts and design schools	123.5	191.9	209.6	8.8	12.8	12.9	13.3	18.4	19.0
Health-related schools	61.3	89.3	87.0	4.4	6.0	5.4	6.6	8.6	7.9
Other schools	29.7	31.0	37.7	2.1	2.1	2.3	3.2	3.0	3.4

[1] Includes enrollment in the 50 States, the District of Columbia, and outlying areas.

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Education, National Center for Education Statistics, *Enrollments and Programs in Noncollegiate Postsecondary Schools, 1978,* 1979, and unpublished tabulations.

Enrollment in Noncollegiate Postsecondary Institutions in 1980



NOTE: Any type of institution making up less than 5 percent of a group or subgroup is combined in the "other" category.

Of total enrollment in noncollegiate postsecondary schools during 1980, about one-third was in public schools and two-thirds in private schools. Within these two groups, enrollment differed greatly by type of school.

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Table 4.10

Enrollment in Postsecondary Vocational Education Programs (VEA),[1] by Type of Institution, and by Program Area: 1979-80

Program Area	Total	Type of Institution[2]		
		Institutions of Higher Education	Noncollegiate State-Approved	Other Postsecondary
Total	6,370,847	4,166,829	501,068	1,702,950
Agriculture	**221,282**	89,418	9,401	122,463
Distribution	**564,705**	423,568	17,866	123,271
Health	**705,624**	536,620	34,100	134,904
Consumer and homemaking	**763,175**	377,812	36,426	348,937
Occupational home economics	**190,089**	128,663	20,316	41,110
Office occupations	**1,427,896**	1,068,051	70,814	289,031
Technical	**467,155**	422,778	19,057	25,320
Trade and industrial	**1,799,757**	979,941	279,697	540,119
Industrial arts	**19,243**	2,204	0	17,039
Other	**211,921**	137,774	13,391	60,756
Total	100.0	65.4	7.9	26.7
Agriculture	**100.0**	**40.4**	**4.2**	**55.3**
Distribution	**100.0**	**75.0**	**3.2**	**21.8**
Health	**100.0**	**76.0**	**4.8**	**19.1**
Consumer and homemaking	**100.0**	**49.5**	**4.8**	**45.7**
Occupational home economics	**100.0**	**67.7**	**10.7**	**21.6**
Office occupations	**100.0**	**74.8**	**5.0**	**20.2**
Technical	**100.0**	**90.5**	**4.1**	**5.4**
Trade and industrial	**100.0**	**54.4**	**15.5**	**30.0**
Industrial arts	**100.0**	**11.5**	**0**	**88.5**
Other	**100.0**	**65.0**	**6.3**	**28.7**

---

[1] Includes only enrollments in programs administered under the Vocational Education Act (VEA).

[2] Postsecondary enrollments are reported for three types of institutions offering postsecondary programs:

Regionally accredited: institutions of higher education included in the NCES Higher Education General Information System (HEGIS);

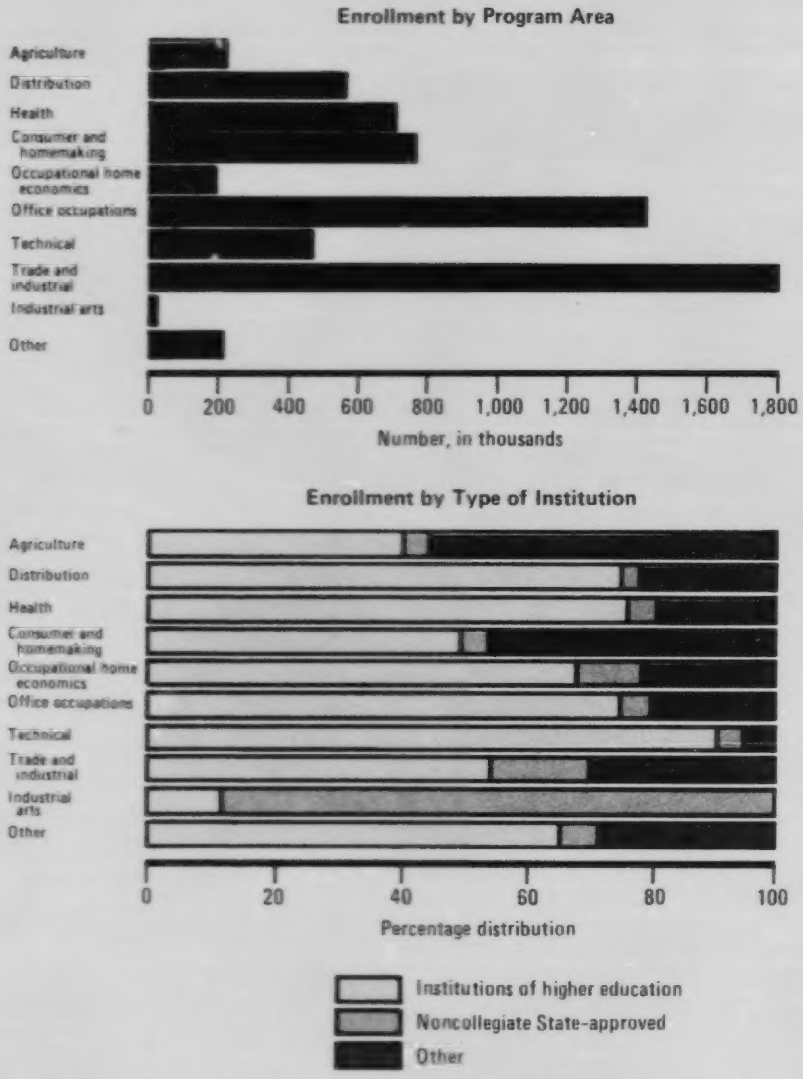
State approved: noncollegiate institutions established by State law or policy.

Other postsecondary: institutions primarily serving secondary students, but in this case offering adult programs designed for persons who have completed or left high school.

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Education, National Center for Education Statistics, Vocational Education Data System, preliminary tabulations.

Postsecondary Vocational Education Enrollments (VEA)



Office Occupations and Trade and Industrial were the vocational education program areas with the largest postsecondary enrollments. At least three-fourths of the enrollment for five of the program areas was in institutions of higher education.

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Table 4.11

Distribution of Postsecondary Vocational Education Students in Occupationally Specific Programs (VEA)[1], by Racial/Ethnic Group, and by Program Area and Sex: 1979-80

Program Area and Sex	Total[2]	Racial/Ethnic Group						Status Unknown
		White[3]	Black[3]	Hispanic	American Indian/ Alaskan Native	Asian or Pacific Islander	Non-resident Alien	
All programs:								
Both sexes	100.0	73.1	12.8	6.4	1.2	2.8	0.4	3.4
Male	49.5	47.5	6.2	3.4	0.7	1.5	0.2	
Female	47.2	35.6	6.6	3.0	0.5	1.3	.2	
Agriculture:								
Both sexes	100.0	85.9	3.9	4.2	1.3	1.3	.3	3.1
Male	65.1	57.2	2.8	3.0	.9	.9	.3	
Female	31.9	28.7	1.1	1.2	.4	.4	0	
Distribution:								
Both sexes	100.0	74.8	9.5	6.3	.9	3.0	.9	4.6
Male	44.6	34.6	4.5	3.1	.5	1.6	.3	
Female	50.8	40.2	5.0	3.2	.4	1.4	.6	
Health:								
Both sexes	100.0	77.8	11.2	4.4	1.0	1.6	.3	3.6
Male	15.1	11.8	1.6	1.0	.3	.3	.1	
Female	81.2	66.0	9.6	3.4	.7	1.3	.2	
Occupational home economics:								
Both sexes	100.0	69.6	17.5	7.4	1.6	1.8	.1	2.0
Male	17.0	11.8	3.3	1.1	.5	.3	0	
Female	81.0	51.8	14.2	6.3	1.1	1.5	.1	
Office occupations:								
Both sexes	100.0	69.9	15.4	7.0	1.2	3.2	.3	3.0
Male	29.4	21.2	4.5	2.0	.5	1.1	.1	
Female	67.6	48.7	10.9	5.0	.7	2.1	.2	
Technical:								
Both sexes	100.0	73.3	10.5	5.0	1.0	2.9	.6	6.8
Male	74.9	59.5	7.6	4.0	.8	2.3	.5	
Female	18.6	13.8	2.9	1.0	.2	0.6	.1	
Trade and industrial:								
Both sexes	100.0	72.9	13.1	7.4	1.1	3.0	.2	2.1
Male	78.4	58.5	10.4	6.0	.9	2.4	.2	
Female	19.3	14.4	2.7	1.4	.2	.6	0	
Other not elsewhere classified:								
Both sexes	100.0	82.9	8.1	4.2	3.4	1.4	.1	0
Male	49.6	40.8	4.7	1.9	1.4	.8	0	
Female	50.5	42.1	3.4	2.3	2.0	.6	.1	

[1] Based on enrollments in programs administered under the Vocational Education Act (VEA) which are intended to provide entry-level job skills for specific gainful occupations.

[2] Male and female enrollments do not total 100.0 because sex is not available for status unknown students.

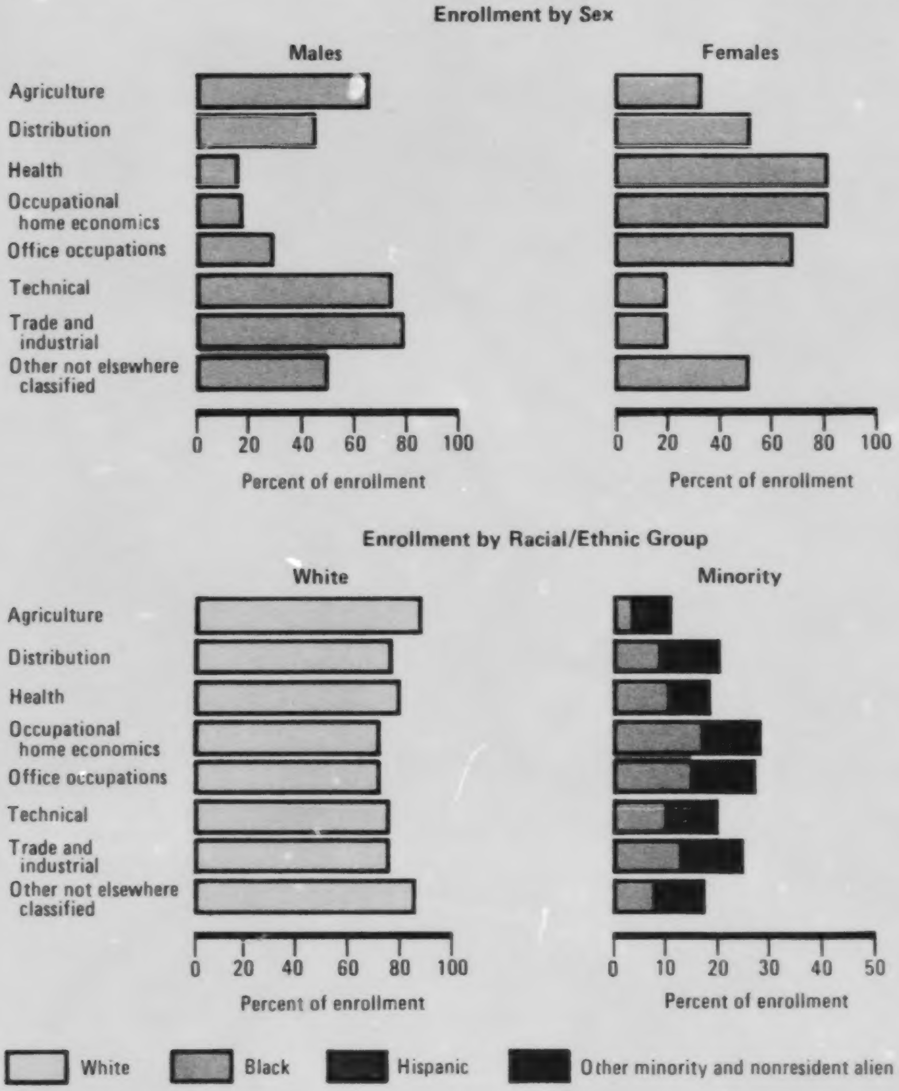
[3] Non-Hispanic.

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Education, National Center for Education Statistics, Vocational Education Data System.

Chart 4.11

Distribution of Enrollment in Postsecondary Vocational Education (VEA)



Enrollments of minorities in occupationally specific vocational programs varied less across program areas than did enrollments by sex.

Table 4.12

Sources of Current Funds Revenues for Institutions of Higher Education, by Level and Control of Institution: Fiscal Years 1970 and 1980[1]

Fiscal Year and Source	Public Institutions			Private Institutions		
	Universities	Other 4-Year	2-Year	Universities	Other 4-Year	2-Year
			Amount, in Thousands			
1970						
Total	$ 8,217,086	$ 3,691,280	$1,860,257	$3,869,879	$3,646,982	$229,757
Government	5,124,060	2,397,863	1,450,929	1,383,178	538,767	14,820
Federal	1,972,220	429,174	104,936	1,263,769	475,722	12,008
State	3,133,323	1,859,481	755,903	78,249	44,496	2,175
Local	18,517	109,208	590,090	41,161	18,549	637
Private sources	258,066	49,997	7,683	357,045	427,155	29,493
Students	2,002,553	1,092,074	363,897	1,396,884	2,283,910	176,919
Tuition and fees	977,252	511,516	246,229	1,006,560	1,563,572	114,717
Auxiliary enterprises	1,025,301	580,558	121,668	390,324	720,338	62,202
Institutional[2]	832,409	151,346	33,747	732,771	397,151	8,524
1980						
Total	16,453,661	15,350,982	7,019,564	9,295,004	9,913,572	487,198
Government	9,499,608	9,707,425	5,276,763	2,769,180	1,572,486	43,234
Federal	2,597,163	1,987,059	489,259	2,514,897	1,286,817	27,648
State	6,829,560	7,520,942	3,623,339	178,223	214,869	11,366
Local	72,885	199,424	1,164,165	76,060	70,800	4,220
Private sources	634,162	314,518	30,017	776,469	1,003,782	49,127
Students	4,122,137	3,370,651	1,455,899	3,353,162	5,474,717	362,233
Tuition and fees	2,029,767	1,805,686	1,024,709	2,531,340	4,262,012	276,826
Auxiliary enterprises	2,092,370	1,564,965	431,190	821,822	1,485,705	85,407
Institutional[2]	2,197,753	1,958,388	256,886	2,396,192	1,589,587	32,606
			Percentage Distribution			
1970						
Total	100.0	100.0	100.0	100.0	100.0	100.0
Government	62.4	65.0	78.0	35.7	14.8	6.5
Federal	24.0	11.6	5.6	32.7	13.0	5.2
State	38.1	50.4	40.6	2.0	1.2	.9
Local	.2	3.0	31.7	1.1	.5	.3
Private sources	3.1	1.4	.4	9.2	11.7	12.8
Students	24.4	29.6	19.6	36.1	62.6	77.0
Tuition and fees	11.9	13.9	13.2	26.0	42.9	49.9
Auxiliary enterprises	12.5	15.7	6.5	10.1	19.8	27.1
Institutional[2]	10.1	4.1	1.8	18.9	10.9	3.7
1980						
Total	100.0	100.0	100.0	100.0	100.0	100.0
Government	57.7	63.2	75.2	29.8	15.9	8.9
Federal	15.8	12.9	7.0	27.1	13.0	5.6
State	41.5	49.0	51.6	1.9	2.2	2.3
Local	.4	1.3	16.6	.8	.7	.9
Private sources	3.9	2.0	.4	8.4	10.1	10.1
Students	25.1	22.0	20.7	36.1	58.0	74.4
Tuition and fees	12.3	11.8	14.6	27.2	43.0	56.8
Auxiliary enterprises	12.7	10.2	6.1	8.8	15.0	17.5
Institutional[2]	13.4	12.8	3.7	25.8	16.0	6.7

[1] Categories of current funds revenues were different in 1970 than they were in 1980. To develop comparable statistics for these two fiscal years, revenues categories were consolidated.

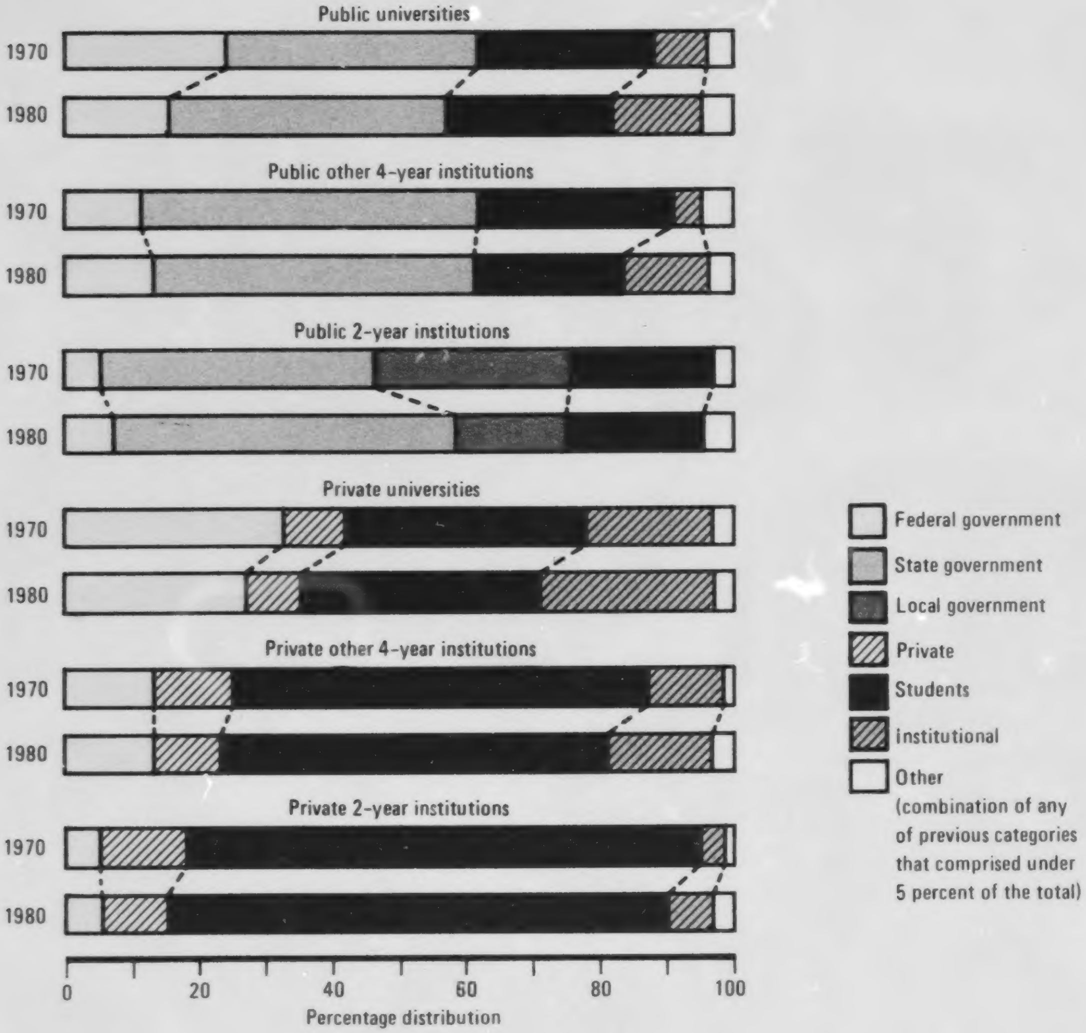
[2] Includes endowment income, sales and services of educational activities, sales and services of hospitals, and other sources.

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Education, National Center for Education Statistics, *Financial Statistics of Institutions of Higher Education: Current Funds Revenues and Expenditures, 1969-70*, 1973, and unpublished tabulations.

Chart 4.12

Distribution of Sources of Current Funds Revenues for Institutions of Higher Education



State funds were a substantial source of revenues for all public institutions, and Federal funds were more important to private universities than to any other type of institution. Students provided a larger share of the revenues for private than for public institutions.

Table 4.13

Market Value[1] of Endowment, in Current and in Constant Dollars[2] in Institutions of Higher Education, by Control and Level of Institution: Fiscal Years 1975 to 1980

Control and Level of Institution	Fiscal Year 1975	1976	1977	1978	1979	1980	Percent Change 1975 to 1980
				Current Dollars			
				Amount, in Thousands			
All institutions	$14,364,545	$15,488,265	$16,304,553	$16,840,129	$18,158,634	$20,743,045	44.4
Universities	8,566,399	9,175,874	9,624,314	9,936,459	10,544,499	12,315,803	43.8
Other 4-year institutions	5,664,241	6,161,410	6,523,104	6,741,074	7,429,451	8,226,095	45.2
2-year institutions	133,905	150,981	157,134	162,596	184,685	201,148	50.2
Public	2,614,642	2,932,736	3,130,906	3,271,417	3,516,154	3,708,329	41.8
Universities	**2,076,542**	**2,332,425**	**2,493,018**	**2,629,809**	**2,837,679**	**3,070,491**	47.9
Other 4-year institutions	**503,026**	**553,732**	**587,299**	**582,379**	**606,746**	**558,303**	11.0
2-year institutions	**35,074**	**46,580**	**50,588**	**59,229**	**71,729**	**79,535**	126.8
Private	11,749,903	12,555,529	13,173,647	13,568,712	14,642,480	17,034,716	45.0
Universities	**6,489,857**	**6,843,449**	**7,131,296**	**7,306,651**	**7,706,819**	**9,245,312**	42.5
Other 4-year institutions	**5,161,214**	**5,607,679**	**5,935,805**	**6,158,695**	**6,822,704**	**7,667,791**	48.6
2-year institutions	**98,831**	**104,401**	**106,546**	**103,366**	**112,956**	**121,613**	23.1
				Constant 1980 Dollars			
All institutions	$20,596,028	$20,828,774	$20,590,205	$19,935,513	$19,950,165	$20,743,045	.7
Universities	12,282,589	12,339,807	12,154,065	11,762,880	11,584,819	12,315,803	.3
Other 4-year institutions	8,121,445	8,285,926	8,237,702	7,980,151	8,162,441	8,226,095	1.3
2-year institutions	191,994	203,041	198,437	192,483	202,906	201,148	4.8
Public	3,748,900	3,943,973	3,953,865	3,872,736	3,863,058	3,708,329	-1.1
Universities	**2,977,367**	**3,136,668**	**3,148,308**	**3,113,194**	**3,117,644**	**3,070,491**	3.1
Other 4-year institutions	**721,244**	**744,664**	**741,671**	**689,426**	**666,608**	**558,303**	-22.6
2-year institutions	**50,289**	**62,641**	**63,885**	**70,116**	**78,806**	**79,535**	58.2
Private	16,847,128	16,884,801	16,636,340	16,062,777	16,087,107	17,034,716	1.1
Universities	**9,305,222**	**9,203,139**	**9,005,757**	**8,549,687**	**8,467,174**	**9,245,312**	-.6
Other 4-year institutions	**7,400,200**	**7,541,263**	**7,496,031**	**7,290,725**	**7,495,832**	**7,667,791**	3.6
2-year institutions	**141,705**	**140,400**	**134,552**	**122,366**	**124,100**	**121,613**	-14.2

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[1] End of fiscal year market value.

[2] Dollars adjusted using the Higher Education Price Index.

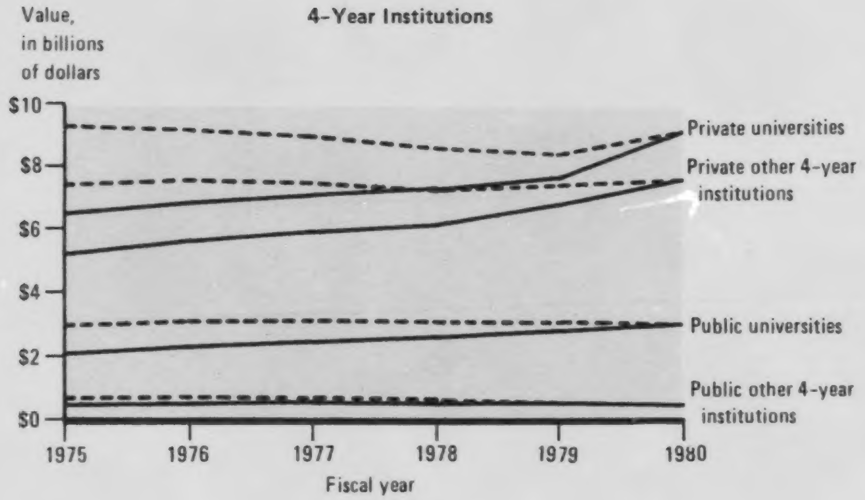
Note: Details may not add to totals because of rounding.

Source: U.S. Department of Education, National Center for Education Statistics, *Financial Statistics of Institutions of Higher Education*, various years.

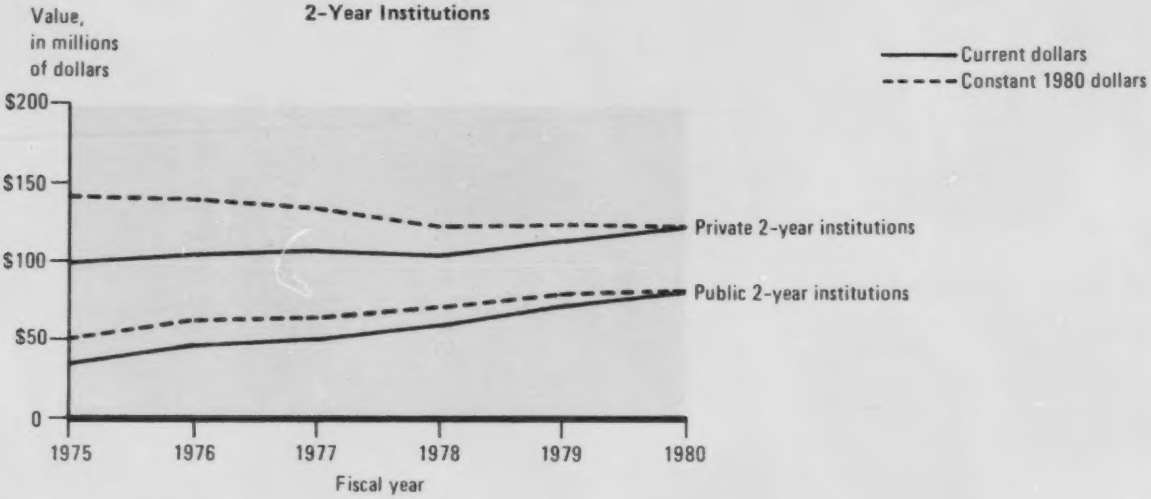
Chart 4.13

Market Value of Endowment

4-Year Institutions



2-Year Institutions



Market value of endowment was higher for private than for public institutions. The value of endowments for all institutions increased between fiscal years 1975 and 1980; however, inflation accounted for virtually all of the rise. In constant dollars, value losses were sustained by public other 4-year institutions and by private 2-year institutions.

Table 4.14

Current Funds Expenditures by Institutions of Higher Education and Per Student Expenditures, by Control of Institution: Fiscal Years 1970 to 1980

Fiscal Year	Current Dollars			Constant 1980 Dollars[1]			Constant 1980 Dollars per FTE Student[2]	
	Total	Public	Private	Total	Public	Private	Public	Private
	Amount, in Thousands						Amount per Student	
1970 . .	$21,043,113	**$13,249,546**	**$ 7,793,567**	$41,442,728	**$26,093,921**	**$15,348,807**	**$5,717**	**$8,746**
1972 . .	25,559,560	**16,484,325**	**9,075,235**	44,851,661	**28,926,529**	**15,925,132**	**5,413**	**8,828**
1974 . .	30,713,581	**20,336,284**	**10,377,297**	47,805,689	**31,653,426**	**16,152,263**	**5,622**	**8,855**
1976 . .	38,903,177	**26,183,956**	**12,719,221**	52,317,382	**35,212,446**	**17,104,936**	**5,398**	**8,736**
1978 . .	45,970,790	**30,725,119**	**15,245,671**	54,420,681	**36,372,703**	**18,047,978**	**5,687**	**8,943**
1980 . .	56,913,588	**37,767,970**	**19,145,618**	56,913,588	**37,767,970**	**19,145,618**	**5,908**	**9,140**

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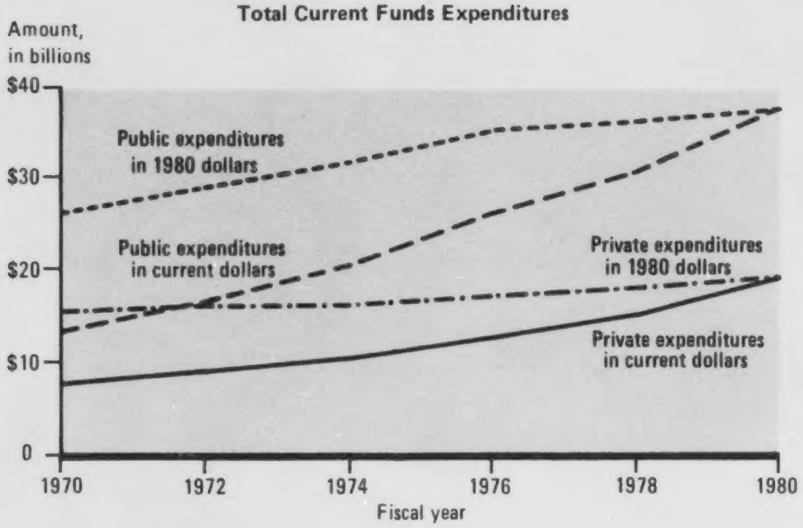
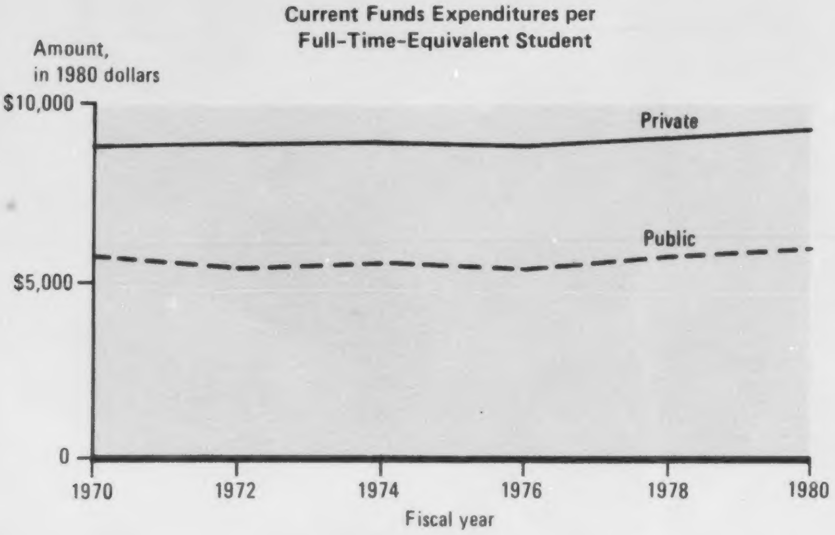
[1] Amount adjusted using the Higher Education Price Index.

[2] Current funds expenditures per full-time-equivalent student adjusted using the Higher Education Price Index.

Source: U.S. Department of Education, National Center for Education Statistics, *Financial Statistics of Institutions of Higher Education*, various years.

Current Funds Expenditures by Institutions of Higher Education





While current funds expenditures of institutions of higher education rose between 1970 and 1980, even after controlling for inflation, adjusted expenditures calculated per FTE student at public institutions have shown relatively small changes during the decade.

Table 4.15

Current Funds Expenditures Per Full-Time-Equivalent (FTE) Student in Institutions of Higher Education, by Function of Expenditure, and by Control and Level of Institution: Fiscal Year 1980

Category	All Institutions	Public Institutions			Private Institutions		
		Universities	Other 4-Year	2-Year	Universities	Other 4-Year	2-Year
				Amounts per FTE Student			
Current funds expenditures, total	$6,706	$8,935	$6,599	$2,910	$15,018	$7,108	$3,363
Education and general	5,248	6,991	5,188	2,715	10,621	5,261	2,808
Instruction	2,179	2,710	2,327	1,365	4,021	1,937	942
Research	601	1,363	414	11	2,180	277	3
Scholarships and fellowships	259	245	169	63	841	514	201
Institutional support and services	2,209	2,674	2,278	1,275	3,578	2,533	1,663
Public service	214	564	159	60	245	113	19
Academic support	457	632	500	222	877	394	200
Student services	302	264	324	235	357	410	300
Institutional support	596	503	594	381	1,020	891	711
Operation and maintenance of plant	554	641	607	318	943	601	368
Mandatory transfers[1]	86	70	94	59	136	124	65
Auxiliary enterprises[2]	764	1,169	698	195	1,376	1,069	555
Hospitals and independent operations[3]	693	776	714	–	3,022	778	–
				Percentage Distribution			
Current funds expenditures, total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Education and general	78.3	78.2	78.6	93.3	70.7	74.0	83.5
Instruction	32.5	30.3	35.3	46.9	26.8	27.3	28.0
Research	9.0	15.3	6.3	.4	14.5	3.9	.1
Scholarships and fellowships	3.9	2.7	2.6	2.2	5.6	7.2	6.0
Institutional support and services	32.9	29.9	34.5	43.8	23.8	35.6	49.4
Public service	3.2	6.3	2.4	2.1	1.6	1.6	.6
Academic support	6.8	7.1	7.6	7.6	5.8	5.5	5.9
Student services	4.5	3.0	4.9	8.1	2.4	5.8	8.9
Institutional support	8.9	5.6	9.0	13.1	6.8	12.5	21.1
Operation and maintenance of plant	8.3	7.2	9.2	10.9	6.3	8.5	10.9
Mandatory transfers[1]	1.3	.8	1.4	2.0	.9	1.7	1.9
Auxiliary enterprises[2]	11.4	13.1	10.6	6.7	9.2	15.0	16.5
Hospitals and independent operations[3]	10.3	8.7	10.8	–	20.1	10.9	–

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[1] Transfers from current funds that must be made to fulfill a legally binding obligation.

[2] Includes expenditures for resident halls, food services, college stores, and intercollegiate athletics.

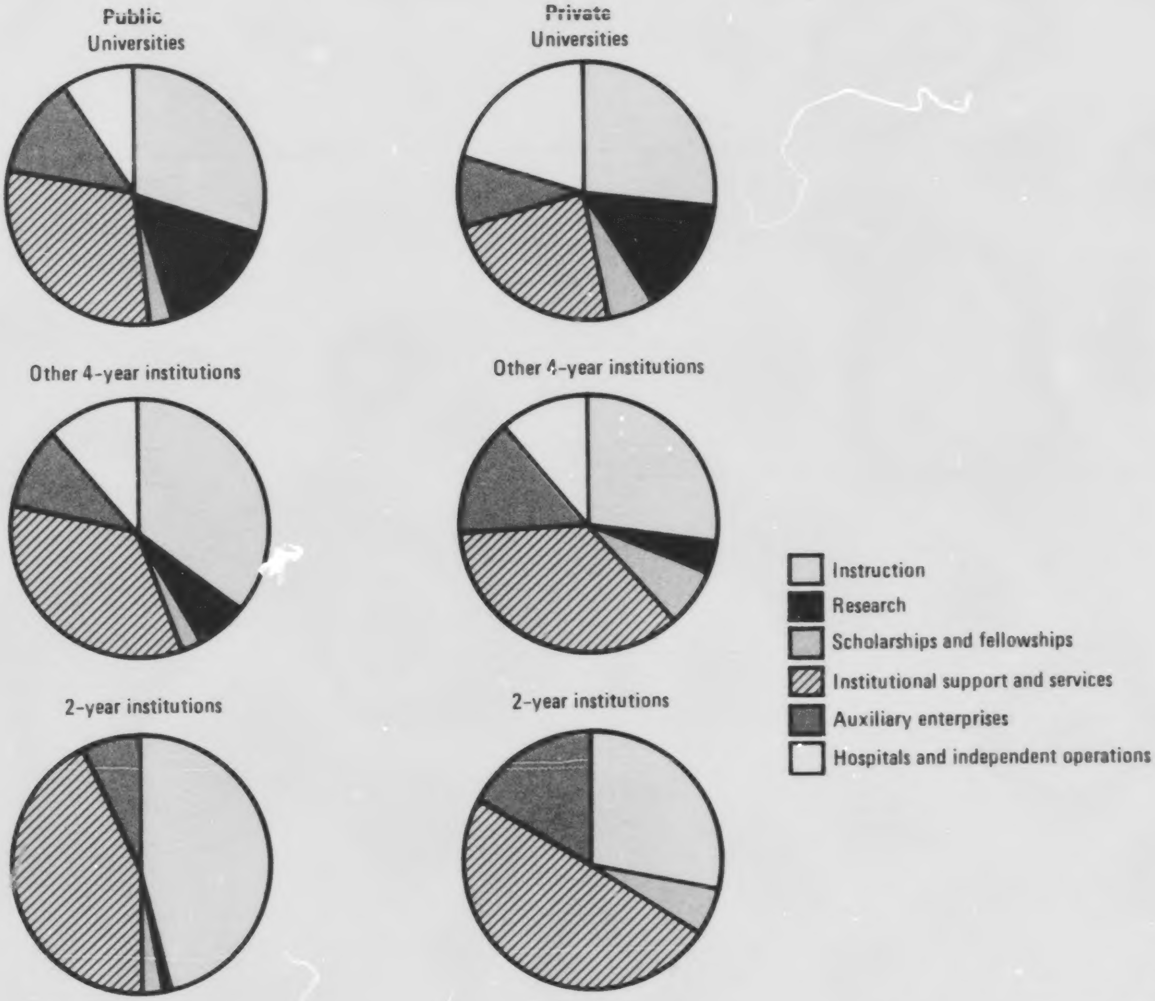
[3] Includes expenditures for hospitals and for independent operations. Independent operations are generally limited to federally funded research and development centers.

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Education, National Center for Education Statistics, unpublished tabulations from the Higher Education General Information Survey.

Chart 4.15

Distribution of Current Funds Expenditures in Institutions of Higher Education



All six groups of institutions of higher education, by control and level, allocated the largest portions of their expenditures per FTE student to instruction and institutional support and service. Public institutions exceeded private institutions in the proportions of expenditures allocated to instruction and research, but private institutions allocated proportionally more to scholarships and fellowships.

Table 4.16

Direct Instructional Expenditures[1] for Postsecondary Vocational Education (VEA), by Type of Institution and by Program Area: Fiscal Year 1980

Program Area	Total Direct Instructional Cost[1]		Type of Institution[2]					
			Institutions of Higher Education		Noncollegiate State-Approved		Other Postsecondary	
	Amount, in Thousands	Percent Federal	Amount, in Thousands	Percent Federal	Amount, in Thousands	Percent Federal	Amount, in Thousands	Percent Federal
Total	$2,020,969	6.6	$1,591,540	4.9	$165,485	13.3	$264,330	12.7
Agriculture	70,801	8.5	55,768	7.0	4,188	22.7	10,825	10.5
Distribution	118,174	4.2	107,238	3.5	2,221	16.6	8,715	9.9
Health	336,115	5.8	281,940	4.8	13,125	13.2	41,051	10.7
Consumer and homemaking	33,306	15.8	20,784	9.0	2,191	23.2	10,331	27.9
Occupational home economics	69,097	4.9	58,968	3.1	2,458	13.1	7,670	16.6
Office occupations	462,850	4.7	401,062	3.6	17,467	10.8	44,322	11.6
Technical	220,282	6.4	203,058	5.6	6,565	12.3	10,659	16.6
Trade and industrial	609,576	7.1	396,380	5.0	110,779	12.1	102,416	9.7
Industrial arts	2,497	10.3	1,125	20.9	20	77.8	1,352	0.5
Other programs not elsewhere classified	98,271	15.5	64,811	10.8	6,471	30.4	26,989	23.2
	Percentage Distribution of Total Instructional Expenditures							
Total		100.0		78.7		8.2		13.1
Agriculture		100.0		78.8		5.9		15.3
Distribution		100.0		90.7		1.9		7.3
Health		100.0		83.9		3.9		12.2
Consumer and homemaking		100.0		62.4		6.6		31.1
Occupational home economics		100.0		85.3		3.6		11.1
Office occupations		100.0		86.7		3.8		9.6
Technical		100.0		92.2		3.0		4.8
Trade and industrial		100.0		65.0		18.2		16.8
Industrial arts		100.0		45.0		0.8		54.2
Other programs not elsewhere classified		100.0		65.9		6.6		27.5

[1] Does not include total costs of programs administered under the Vocational Education Act (VEA); includes only instructional costs: wages, salaries and benefits for staff with instructional assignments; instructional supplies and equipment, and purchase of instructional services. Both occupationally-specific and general programs are included.

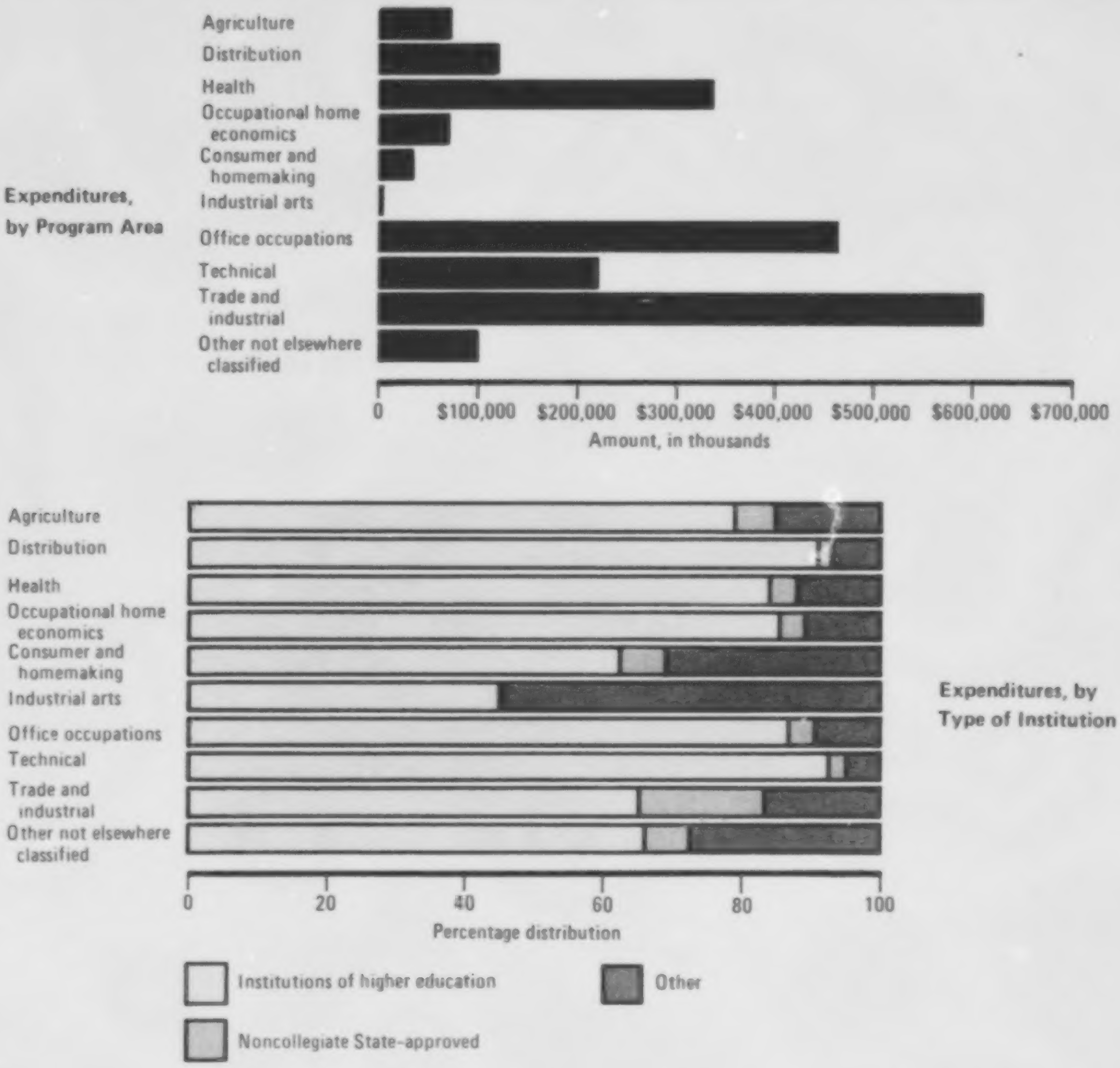
[2] Postsecondary programs are reported for three types of institutions:
Regionally accredited: institutions of higher education included in the NCES Higher Education General Information System (HEGIS);
State approved: noncollegiate institutions established by State law or policy;
Other postsecondary: institutions primarily serving secondary students, but in this case offering adult programs designed for persons who have completed or left high school.

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Education, National Center for Education Statistics, Vocational Education Data System.

Chart 4.16

Direct Instructional Expenditures and Distribution of Total Instructional Expenditures for Postsecondary Vocational Programs (VEA)



The three vocational education program areas of Trade and Industrial, Office Occupations, and Health reported the highest totals for direct instructional expenditures.

Table 4.17

Median Family Income, by Racial/Ethnic Group and Average Student Charges, by Type and Control of Institution: 1970 to 1980

Item	Year[1]										
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Median income:											
All families	$ 9,867	$10,285	$11,116	$12,051	$12,902	$13,719	$14,958	$16,009	$17,640	$19,661	$21,023
White families	10,236	10,672	11,549	12,596	13,408	14,268	15,537	16,740	18,368	20,502	21,904
Black families	6,279	6,440	6,864	7,269	8,006	8,779	9,242	9,563	10,879	11,644	12,674
Hispanic families[2]	–	–	8,183	8,715	9,540	9,551	10,259	11,421	12,566	14,569	14,716
Median income as a percent of median income for all families:											
All families	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White families	103.7	103.8	103.9	104.5	103.9	104.0	103.9	104.6	104.1	104.3	104.2
Black families	63.6	62.6	61.7	60.3	62.0	64.0	61.8	59.7	61.7	59.2	60.3
Hispanic families[2]	–	–	73.6	72.3	73.9	69.6	68.6	71.3	71.2	74.1	70.0
Average student charges[3]											
Universities:											
Public	$1,477	$1,579	$1,668	$1,707	$1,760	$1,935	$2,055	$2,167	$2,286	$2,487	$2,711
Private	3,163	3,375	3,512	3,717	4,076	4,467	4,847	5,193	5,604	5,888	6,566
Other 4-year institutions:											
Public	1,206	1,263	1,460	1,506	1,558	1,657	1,797	1,924	2,025	2,198	2,419
Private	2,599	2,748	2,934	3,040	3,156	3,385	3,562	3,811	4,123	4,693	5,243
2-year institutions:											
Public	1,018	1,073	1,197	1,274	1,339	1,386	1,488	1,590	1,685	1,817	2,018
Private	2,103	2,186	2,273	2,410	2,591	2,711	2,905	3,062	3,344	3,754	4,299
Average student charges as a percent of median income for all families:											
Universities:											
Public	15.0	15.4	15.0	14.2	13.6	14.1	13.7	13.5	13.0	12.6	12.9
Private	32.1	32.8	31.6	30.8	31.5	32.5	32.4	32.4	31.8	29.9	31.2
Other 4-year institutions:											
Public	12.2	12.3	13.1	12.5	12.1	12.1	12.1	12.0	11.5	11.2	11.5
Private	26.3	26.7	26.4	25.2	24.5	24.7	23.8	23.8	23.4	23.9	24.9
2-year institutions:											
Public	10.3	10.4	10.8	10.6	10.4	10.1	9.9	9.9	9.6	9.2	9.6
Private	21.3	21.3	20.4	20.0	20.1	19.8	19.4	19.1	19.0	19.1	20.4

– Not available.

[1] Median income is for calendar year. Average student charges are for the academic year beginning in fall of the year indicated.

[2] Represents families in which the head is Hispanic origin.

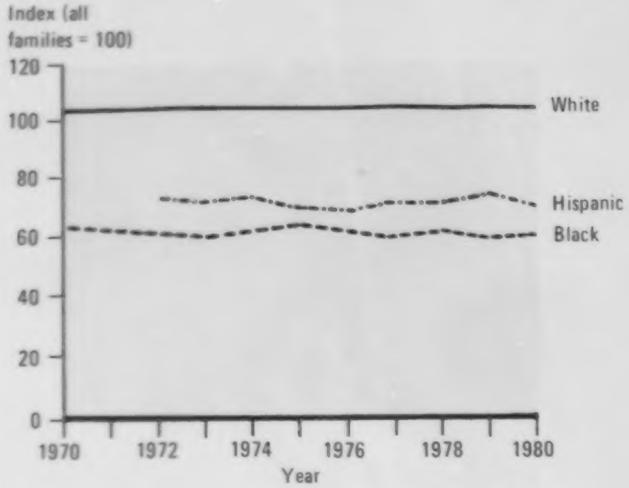
[3] Estimated average charges per full-time undergraduate student. Includes tuition, board and room charges.

Source: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-60, No. 123, 1980 and U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics to 1988-89*, 1981.

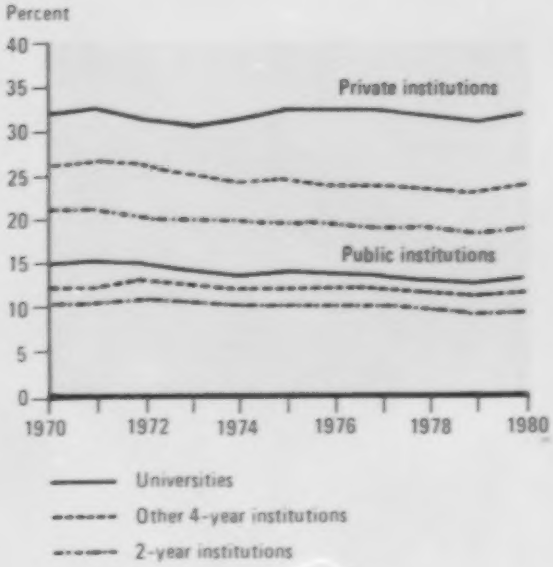
Chart 4.17

Median Family Income Related to Average Student Charges

Median Income, by Racial/Ethnic Group



Student Charges as a Percent of Median Family Income



Although college tuition and room and board charges rose throughout the past decade, the ratio of average student charges to median family income varied by only small amounts. Median family income for blacks and Hispanics was substantially lower than that for whites; as a result, student charges represented a large proportion of family income for minorities.

Table 4.18

Parents' View of Responsibility for Cost of Postsecondary Education, by Parental Income Level and Racial/Ethnic Group: 1980

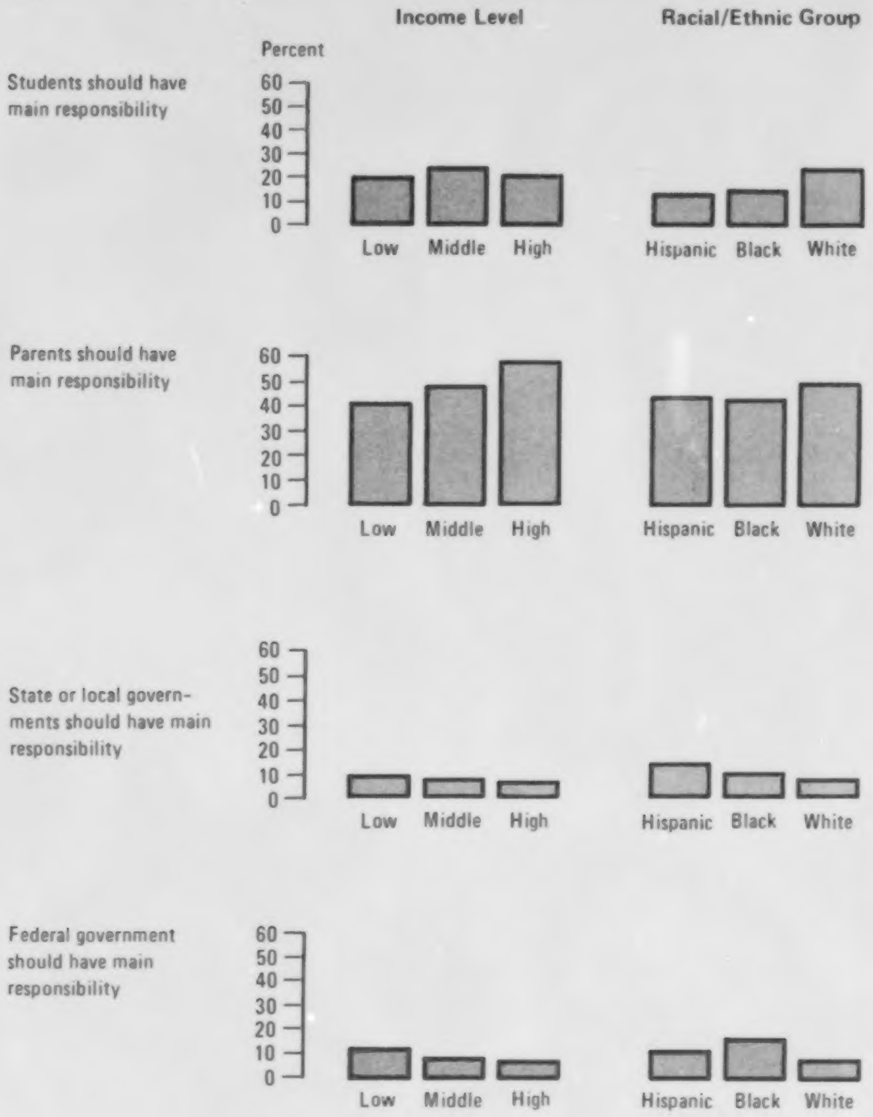
Question: "Who should have the **main** responsibility for the cost of education beyond high school?"

	Parents' Income Level			Racial/Ethnic Group		
Responses	Low, Less Than $20,000	Middle, $20,000 to 34,999	High, $35,000 and Above	Hispanic	Black[1]	White[1]
Population estimate	2,144,835	1,933,254	1,989,927	330,679	879,308	4,948,573
	Percentage Distribution of Parents' Responses					
Total	100.0	100.0	100.0	100.0	100.0	100.0
Students	**20.3**	**23.5**	**20.5**	**13.0**	**14.1**	**23.2**
Parents	**41.0**	**48.7**	**58.0**	**44.1**	**43.6**	**50.2**
State or local governments . . .	**8.8**	**7.8**	**6.9**	**14.0**	**10.0**	**7.1**
The Federal government	**12.4**	**8.4**	**7.1**	**11.6**	**16.1**	**7.9**
Don't know	17.6	11.7	7.5	17.2	16.2	11.6

[1] Non-Hispanic.

Source: U.S. Department of Education, National Center for Education Statistics, *High School and Beyond Study*, unpublished tabulations.

Parents' View of Responsibility for Cost of Financing Postsecondary Education



Close to half of the responding parents thought that parents should have the main responsibility for the cost of education beyond high school. But they differed by income and racial/ethnic group. Those least likely to place main responsibility on parents (though still over 40 percent) were the low-income parents and the Hispanic and black parents.

Table 4.19

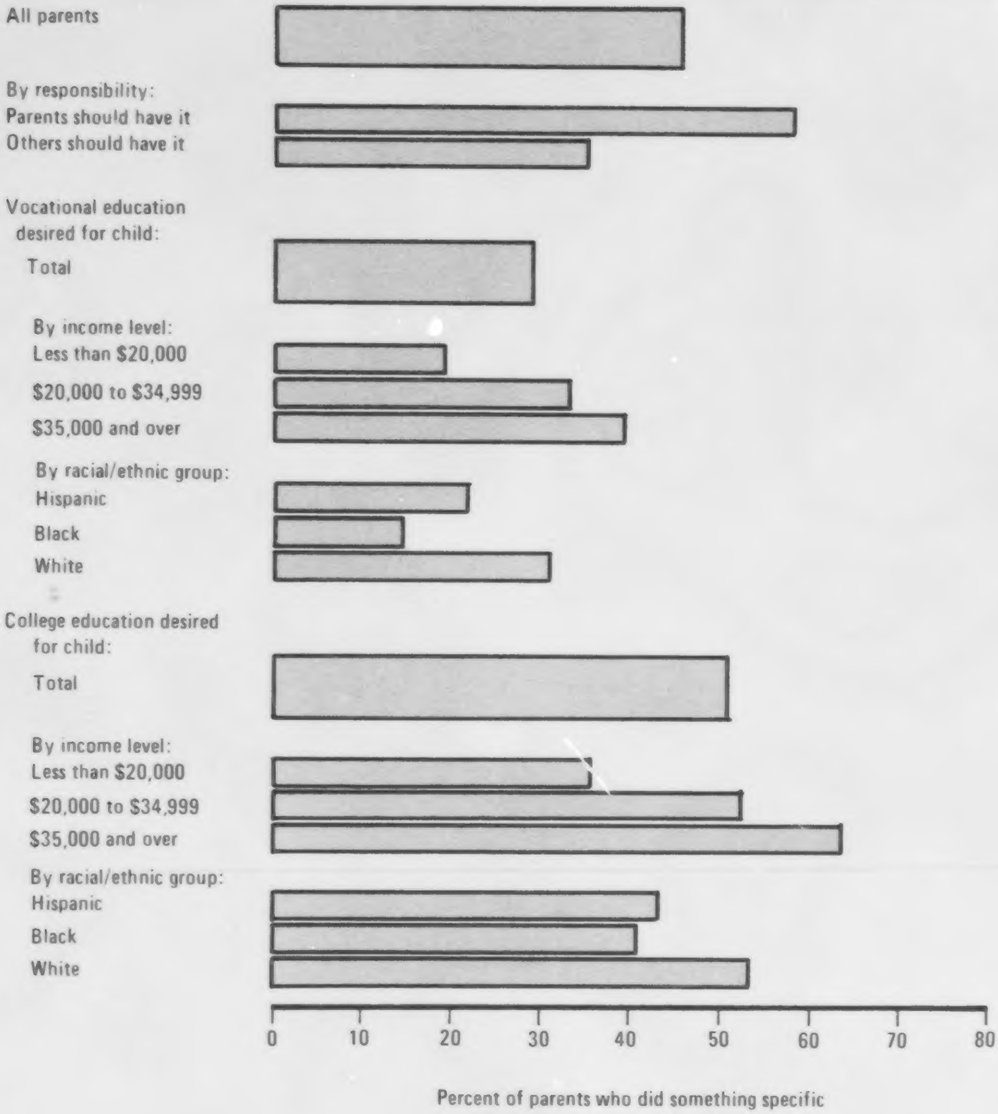
Action Taken by Parents of High School Seniors to Pay for Children's Postsecondary Education, by Parents' Educational Goals for Their Child, Income Level, and Racial/Ethnic Group: 1980

Categories of Parents	Question: "Did you or your spouse do anything specific in order to have some money for (your) child's education after high school?"		
	Parents' Responses		
	Total	Did Something Specific	Did Not Do Anything Specific
	Percentage Distribution		
All parents wanting some postsecondary education for their son or daughter	100.0	45.4	54.6
Parents who responded that the main responsibility for the cost of education beyond high school lies with:			
Parents	100.0	58.1	41.9
Students or government	100.0	34.8	65.2
Parents wanting their child to have vocational education after high school:			
Total	100.0	28.9	71.1
By income level:			
Less than $20,000	100.0	19.1	80.9
$20,000 to $34,999	100.0	33.0	67.0
$35,000 and above	100.0	39.3	60.7
By racial/ethnic group:			
Hispanic	100.0	21.8	78.2
Black[1]	100.0	14.8	85.2
White[1]	100.0	30.9	69.1
Parents wanting their child to have at least some college education:			
Total	100.0	50.9	49.1
By income level:			
Less than $20,000	100.0	35.6	64.4
$20,000 to $34,999	100.0	52.5	47.5
$35,000 and above	100.0	63.8	36.2
By racial/ethnic group:			
Hispanic	100.0	43.2	56.8
Black[1]	100.0	40.7	59.3
White[1]	100.0	53.5	46.5

[1] Non-Hispanic.

Source: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, unpublished tabulations.

Parents' Action to Finance Children's Postsecondary Education



Less than half of all parents had adopted some sort of savings plan, and/or had started working or taken an additional job, to have the money to finance a child's postsecondary education. Parents desiring some college education for their children were almost twice as likely to take specific action as those wanting vocational education for their children.

Table 4.20

Appropriations for Federal Student Financial Aid in Postsecondary Education Institutions, by Type of Award: Fiscal Years 1973 to 1981

Fiscal Year	Type of Award				
	Pell Grants	Supplemental Educational Opportunity Grants (SEOG)	National Direct Student Loan (NDSL)	College Work-Study (CWS)	Guaranteed Student Loan (GSL)
	Amount, in Millions				
1973	$ 122.1	$ 0	[1]$293.0	$270.2	$ 291.6
1974	457.0	210.3	298.0	270.2	398.7
1975	840.2	240.3	329.4	420.0	594.2
1976	1,325.8	240.1	331.0	390.0	807.8
1977	[2]1,903.9	250.1	323.2	390.0	357.3
1978	[3]2,160.0	270.1	325.7	435.0	479.7
1979	[4]2,431.0	340.1	328.9	550.0	945.0
1980	[5]1,718.0	370.0	300.8	550.0	1,609.3
1981	[6]2,604.0	370.0	200.8	550.0	2,535.0
	Three-Year Moving Average of Appropriations Amounts[7] Amount, in Millions				
1973	$ 298.6	$210.3	$295.5	$270.2	$ 345.2
1974	479.1	225.3	306.8	320.1	428.2
1975	880.3	230.2	319.5	360.1	600.2
1976	1,356.6	243.5	327.9	400.0	586.4
1977	1,796.6	253.4	326.6	405.0	548.3
1978	2,165.0	286.8	325.9	458.3	594.0
1979	2,103.0	326.7	318.5	511.7	1,011.3
1980	2,251.0	360.0	276.8	550.0	1,696.4
1981	2,161.0	370.0	250.8	550.0	2,072.2

[1] Of this amount, $269.4 million was available for use in 1973 and $23.6 million was mandated for 1974.

[2] Of this amount, $211.7 million was used for 1976 awards.

[3] Of this amount, $579.0 million was used for 1980 awards.

[4] Of this amount, $54.0 million was used for 1980 awards.

[5] Excess monies in 1978 and 1979 were carried forward; $140.0 million was rescinded; $258.0 million was drawn down from 1981. Total funds available were $2,469.0 million.

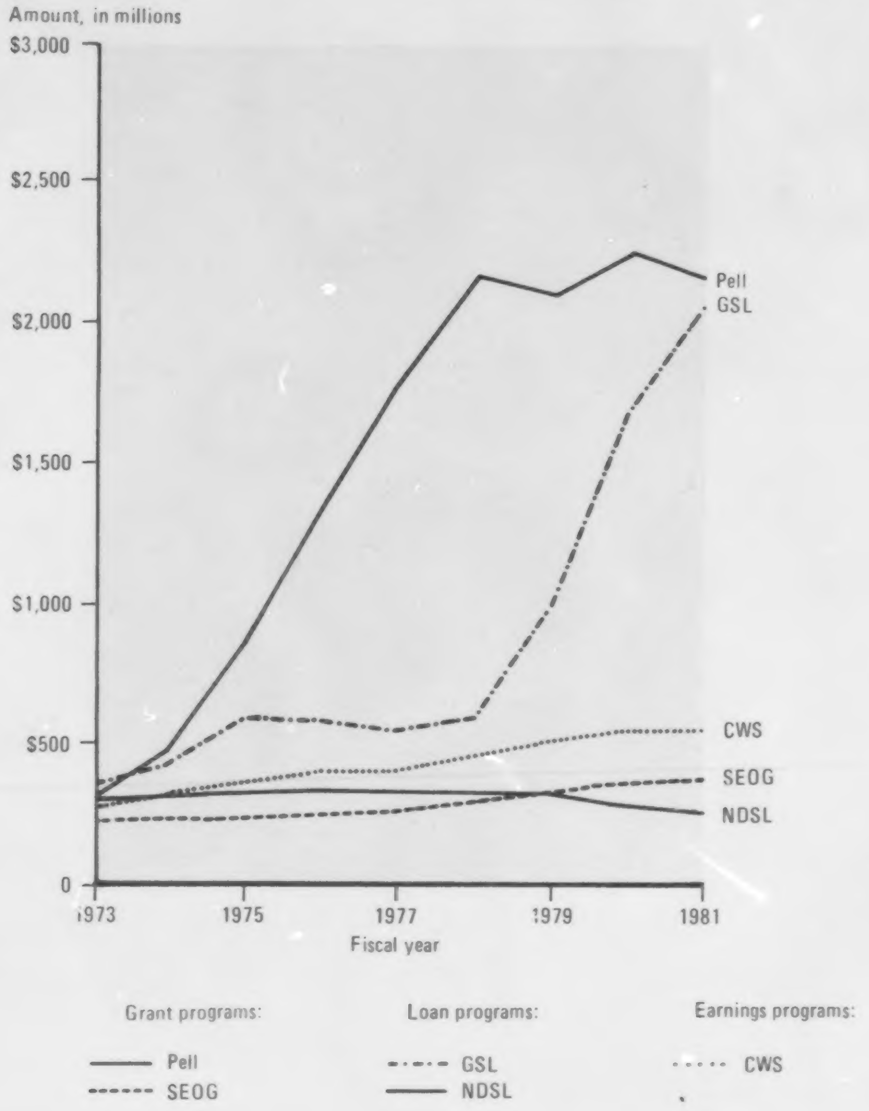
[6] Includes $150.0 million reduction due to Budget Amendment; includes supplemented appropriation. Of this amount, $258.0 million was drawn down for 1980.

[7] Calculations for 1973 and 1981 are based on a 2-year average with the adjacent fiscal year.

Source: U.S. Department of Education, Office of Planning Budget, and Evaluation, *Annual Evaluation Report, Fiscal Year 1981, Volumes 1 and 2,* 1981.

Chart 4.20

Three-Year Moving Average of Appropriations for Federal Student Financial Aid



The Pell Grant program and the GSL program have grown significantly over the last 9 years. Appropriations for three other programs, SEOG, NDSL, and CWS, were considerably less and did not experience the growth shown by the other two programs. In fact, support for NDSL decreased from 1973 to 1982.

Chapter 5
Educational Outcomes

At the same time that schools and colleges have had to deal with demographic shifts in enrollment and the economic pressures of increasing costs and new program demands, the outcomes of schooling have come under closer scrutiny. This chapter focuses on these outcomes, how they relate to schooling, how they change as a student progresses through school, and how they vary among students of the same age or class at different points in time.

Although student outcomes are generally associated with academic achievement, this chapter takes a somewhat broader perspective. It suggests that students not only acquire subject-related skills in schools, but they also acquire attitudes toward those skills and school in general. Additionally, schools affect an individual's behavior both within the classroom and later in life. This chapter will address all three domains, attitudes and behavior as well as academic achievement, in its examination of educational outcomes.

Even though these three domains will be profiled in this overview, the final picture of educational outcomes will not be complete, nor will the effects of school be unambiguously demonstrated. It will be incomplete primarily because there is a paucity of national data on many outcomes for each level of education and for the various types of schools within each level. More troublesome than incompleteness, however, is the inability to demonstrate clearly the effects of schools on individual attainment. This problem arises because individuals develop in many environments, only one of which is the school. Each of these environments affects the individual, and the experiences an individual encounters in each tend to interact. It is, therefore, almost impossible to isolate completely those particular experiences that bring about a specific behavior, attitude, or skill. Even if it were possible to control an individual's environment once in school, experiences before entering into school would affect the individual's behavior and performance in school and his or her ultimate accomplishments. Additionally, other factors, such as maturation, play a critical, but almost unmeasurable, role.

These problems notwithstanding, within the limits of existing data, the levels of achievement, the attitudes that students espouse, and the behaviors students exhibit, will be described. All three outcomes will be compared for groups of students that might be expected to have similar backgrounds. Ways in which these outcomes change with increasing levels of schooling, either for the same individuals or for the same population of individuals, will be examined. And, in a few cases, statistical techniques are applied that either control for some experiential and background factors or that describe the school-related variables relative to other factors.

Achievement

Of all the skills that might be considered in an examination of the cognitive outcomes of schooling, reading and mathematics skills will be the focal points for this chapter. There are several reasons for focusing primarily, although not exclusively, on these two areas. First, recent national debate on achievement-related outcomes has centered on mathematics and reading, often questioning the effectiveness of schools in providing minimal competence in these areas. Second, reading and mathematics involve fundamental skills whose acquisition are critical to learning in almost every other subject area. Finally, most studies of school outcomes at the national level have concentrated on the assessment of reading and mathematics, so it is possible to provide a more comprehensive examination of achievement in these areas than in any others.

In 1976, the Study of the Sustaining Effects of Compensatory Education assessed the reading and mathematics skills of first graders in the fall of the school year. This study also collected information on the children's preprimary experience, providing an opportunity to measure the effects of preprimary education on later achievement. Measuring such effects is confounded by the influence of family background factors. Aside from participation in Head Start, participation in preprimary education is related to higher family income and parental education. In order to examine the effects of the preprimary experience on achievement apart from these background variables, test scores were adjusted to compensate for the differing family characteristics of students.

Kindergarten experience appeared to have a positive effect on reading and mathematics scores at the start of the first grade, regardless of whether a child had any other preprimary contact (entry 5.1). There was also a significant interaction between daycare/nursery school experience or preschool experience and kindergarten. That is, children who went from daycare/nursery school or preschool into kindergarten did significantly better in reading and mathematics upon entering first grade than did children who only had one of these preprimary experiences. This was not the case, however, for children who participated in Head Start programs. They performed as well in reading and mathematics, whether or not they also attended kindergarten.

Data from the Sustaining Effects Study (SES) also can be used to examine academic progress throughout the elementary school grades. In addition to assessing first graders, the SES assessed achievement in reading and mathematics in the fall and spring of the 1976-77 school year in a national probability sample of children in grades one through six. In order to have the potential of comparing scores among the six grades, scores were equated for each test by level used in the study. This adjustment allows for the presentation of what might be called learning curves for both reading and mathematics as children progress through elementary school (entry 5.2). Although in the traditional sense a learning curve represents an individual's performance on a single task over time, the learning curves shown here represent the mean reading and mathematics achievement performance of groups of students in grades one to six in the fall and spring of the school year. The shapes of these curves, however, is predictable in the sense that early in the learning process (grades one to three) the curves are quite steep, suggesting a great deal of learning, while later in the process the curves start flattening out, suggesting a slow down in the rate of change in achievement. The semilogarithmic presentation of this data demonstrates this point more clearly, since the slopes of these curves represent the percent change in achievement over a school year. These curves show that both white and minority students had approximately the same rate of change over the six elementary school years, although minority children tended to start at a slightly lower level.

Since there was such consistent improvement in fall to spring scores, an investigation was made of specific school-related activities that might be, to some extent, responsible for this change. The total time in instruction in reading and mathematics was examined for its possible contribution to achievement scores in the spring of the school year. Again, to separate the effects of school experience on achievement from other factors, scores were adjusted to compensate for variables such as initial achievement at the start of the year, parental education, family income, and participation in compensatory education (entry 5.3). This adjustment allows classroom effects to be isolated from prior schooling experiences and other background factors. While the total time in instruction was a slight factor in mathematics achievement, it appeared unrelated to reading achievement, even though more time was spent in reading than in mathematics instruction.

The proportion of time spent in various instructional groupings was also examined in relation to spring achievement scores. Spring scores were predicted from the proportion of time spent in six types of instructional situations, as well as from fall achievement test scores and other background variables. The analysis yielded the relative importance of each factor in predicting the achievement score. As might be expected, reading scores in the fall were the best predictor of reading scores in the spring. Among instructional factors, the proportion of time spent in large group-teacher instruction, in small group instruction, and in individual programmed instruction were the most important predictors of reading scores (entry 5.4). Large increases in the amount of time spent in these instructional situations, however, yielded only slightly better scores.

Predicting spring mathematics test scores from the various instructional situations and antecedent factors again demonstrated the importance of fall test scores (entry 5.5). Two instructional variables were also seen to contribute significantly to the spring scores: time spent in large group instruction and time spent with a tutor. The effect of time spent with a tutor on the spring scores was, however, negative, suggesting that students who spent a great deal of time in a tutoring situation might be among the weakest mathematics students.

Additional evidence of the effects of schooling at both the elementary and secondary levels is provided by results from the National Assessment of Educational Progress (NAEP). NAEP regularly assesses 9-, 13-, and 17-year-olds enrolled in school in several subject areas. As part of the NAEP assessment, a portion of the exercises is repeated in each assessment and some of the same exercises are administered to 9- and 13-year-olds, and to 13- and 17-year-olds. By looking at the repeated assessments, it is possible to ascertain changes in academic performance as a function of time. By comparing the performance of students at different ages it is also possible to examine the effects of schooling as students progress through the elementary and secondary school grades.

The mean reading performance of 9- and 13-year-olds was compared on the same 9 exercises, and that of 13- and 17-year-olds on the same 44 exercises, from 1971 to 1980 (entry 5.6). It must be kept in mind that the scores of the 13-year-olds on the two different sets of exercises are not comparable, since the exercises administered to both 13- and 17-year-olds were more difficult than those given to both the 9- and 13-year-olds. Within a set of exercises, however, improvement of scores was evident at each higher age level. While this improvement would be expected, its evidence is reassuring.

The greatest improvement in reading performance was registered among younger blacks. This may reflect the heavy emphasis that was placed on basic skills and compensatory education in the elementary schools during the 1970's. At least two observations seem to support this contention. First, 9-year-olds who were most likely to participate in compensatory education — blacks, students from disadvantaged communities, or those with less educated parents — improved their scores significantly from 1971 to 1980 (entry 5.7). Second, within each assessment year, there was more improvement in reading scores between 9- and 13-year-olds than between 13- and 17-year-olds — particularly for blacks. Additionally, in 1980, the performance of 13-year-old blacks came appreciably closer to the performance of 13-year-old whites than in either 1971 or 1975 (entry 5.6).

With respect to mathematics performance, a somewhat different picture emerges. Although students improved significantly between ages 9 and 13 and between 13 and 17, scores for most groups declined from 1973 to 1978. The yearly progression rate in performance of blacks was comparable to the yearly progression rate in performance of whites (entry 5.8). In addition, from 1973 to 1978, only the performance of black 9-year-olds improved significantly (entry 5.9).

The music assessments conducted by NAEP in 1972 and 1979 give some indication of how subjects other than reading and mathematics fared during the period when the major initiative in education was a return to basics (entry 5.10). Performance in music tended to decline during this period. Students at each age level tended to participate in informal music activities at a fairly high rate in 1979, although older students were less likely to participate in organized music groups and instruction.

While performance in reading and mathematics continually improves throughout elementary and secondary school, the rate of improvement tends to slow down. This phenomenon may well be related to the lack of opportunity for formal instruction in reading during high school, as well as the reluctance of many students to enroll in mathematics courses in high school. The High School and Beyond study shows that higher test scores in reading and vocabulary were associated with more years of English instruction taken in high school (entry 5.11). Also, achievement scores in basic mathematics were highly related to the number of years of mathematics taken in high school, and advanced mathematics courses completed (entry 5.12 and 5.13).

In considering achievement at levels beyond high school, little thought is given to the attainment of basic skills in reading and mathematics, particularly as an outcome of higher education. Yet, many colleges are faced with the need for providing instruction in the basic skills so students can succeed in college-level coursework. The extent that students acquire basic skills in college can be observed by looking at longitudinal data from the fourth follow-up of the high school class of 1972 (entry 5.14). Because the same vocabulary and mathematics tests were administered to the same individuals — initially when they were seniors in high school and again 7 years later — it was possible to adjust the mean scores for prior performance. Participating in higher education seems to make a marked difference in performance on tests of basic skills. Although it might be argued that individuals with better skills would be more likely to participate in higher education than individuals with poorer skills, the use of means adjusted for performance in high school helps to preclude this possibility.

Attitudes

The emphasis thus far in this chapter has been on the academic outcomes of schooling. Nonacademic outcomes as well are associated with the schooling experience. Although attitudes are formed early in life and are somewhat resistant to change, they too are learned responses and as such, can be acquired or modified within the school environment. Again, the schooling experience is only one of many influences on student attitudes and may not be the most dominant, even with regard to attitudes towards school itself.

Attitudes of elementary school students toward reading, mathematics, and school in general were collected in the fall and spring of grades one to six, in conjunction with the achievement testing conducted in the Sustaining Effects Study. Earlier it was demonstrated that learning in reading and mathematics increased with increasing grade level. Attitudes toward reading and mathematics, however, did not change consistently over the entire six-year period, although they seemed to be more positive in the spring of the school year than in the fall, at least for the younger students (entry 5.15). Attitudes toward school in general, however, appeared to be less positive in each succeeding grade. Although the changes in attitudes toward school were small, they were consistent and, it might be projected that as children continue through school, attitudes toward school would continue to decline.

There are no data at a national level with which these same attitudes, measured in the same way, can be compared for students at higher grade levels. However, the NAEP assessment indirectly supports this idea of a "fall-off" effect in attitudes toward reading. This indirect support is in the form of reported behavior. Attitudes, in addition to having a knowledge component and a feeling component, frequently have a behavioral component as well. It is the behavioral component that permits an individual to formulate a response to situations and engage in those activities about which he/she feels positive; it also guides an individual in avoiding situations and activities which they do not like. The NAEP data indicate that 17-year-olds do less reading, are less willing to spend time reading, and are less comfortable with reading material than 9- or 13-year-olds (entry 5.16).

Ratings that students give to the importance of certain life goals suggest their value orientation toward family, work, and community involvement. Seniors in 1972 and 1980 and sophomores in 1980 were asked to rate the importance of several goals in their lives (entry 5.17). In addition, 7½ years after high school graduation, these same goals were rated once more by the same individuals who had rated them in 1972. The 1972 seniors are classified by the level of education they had attained by 1979. Additional education appeared to increase the importance of a career, particularly among women. While in high school, female students who later went on to college valued working more than those with no college experience and 7½ years later, gave working even greater importance. In 1980, sophomores and seniors differed little in these values. However, the time of assessment did seem to make a definite difference in how students valued having lots of money and working to correct social inequalities. Compared to seniors in 1972, more of the 1972 seniors in 1979 and more of the 1980 seniors felt that having lots of money was very important, and fewer respondents felt that working to correct social inequalities was very important. This suggests perhaps a definitive shift in student values which reflect changes in societal goals over these 7 or 8 years.

Perhaps one of the most important outcomes of high school is entering postsecondary education. Indeed, high schools are often judged on the proportion of graduating seniors who enter postsecondary education immediately after high school. Having aspirations for higher education is an excellent indicator that a student will go on to postsecondary school immediately after high school and also of eventual attainment 7½ years after high school graduation (entries 5.18 and 5.19).

As with other nonacademic outcomes of school, educational aspirations are affected by the students' family characteristics, the time in which the aspirations are expressed, as well as by the school itself. In fact, of the three types of effects on aspirations, student family characteristics seem to be the most potent (entry 5.20). Time is also important, as evidenced by differences in the aspirational level of seniors in 1972 and seniors in 1980, particularly for graduate-level education (entry 5.21). Differences were much less apparent between the sophomore and senior classes in 1980, suggesting that 2 additional years of high school had no appreciable effect on aspirations.

Social and Economic Outcomes

From 1970 to 1979, the changing distribution of occupations by educational attainment level indicates a significant shift toward higher educational levels among all classes of workers in all occupations, for both men and women (entry 5.22). For example, in 1970 the preponderance of blue collar workers had not completed high school; in 1979 the majority had at least completed high school and about 17 percent had some college work or had completed a degree. Whether this observed shift is the result of more stringent educational requirements for employment in a technological society, or whether it is the result of a larger supply of college-educated individuals entering a shrinking job market is not clear.

However, it is clear that the unemployment rate of college-educated individuals is not only much lower than the unemployment rate of individuals with less education, but also that college-educated individuals are not as subject to the vagaries of the economy or the labor market (entry

5.23). This suggests either that in tight labor markets, more highly educated individuals obtain jobs that would have ordinarily been held by less educated individuals, or that college-educated persons are employed in occupations that are more resistant to poor economic conditions.

Higher educational levels are associated with higher income levels for both men and women (entry 5.24). Generally, tables of income by educational attainment level include all workers over a certain age, with varying amounts of work experience. To eliminate the confounding effects of work experience on earnings, a particular problem in comparing earnings of men and women, starting salaries of the 1972 high school class were examined after they completed their formal schooling. Since those with less education probably entered the work force earlier, these salaries were converted to 1980 dollars to adjust for inflation. The results show that increasing income is associated with increasing levels of schooling, at all levels of postsecondary education. It is also interesting to note that, even when experience and longevity effects are controlled, women, at all levels of education, tended to earn significantly less than men. This is particularly true at the lower educational levels. At the upper levels, however, while women still earned less than men, their income appears to be approaching that of men.

The nature of the relationship between income and educational level is changing over time. As the ratio of earnings of college graduates to high school graduates suggests, the differential in earnings between high school graduates and college graduates has narrowed appreciably from 1965 to 1980. The income differential between college graduates and individuals with post-baccalaureate college experience, however, was much more stable over this period (entry 5.25). For women, the same trends are evident, but the shifts are not as radical. Additionally, in 1980, women with a college degree earned about 31 percent more than women with only a high school diploma; and women with graduate school experience earned about 20 percent more than women with a bachelor's degree. The comparable figures for men were 25 percent and 13 percent, respectively.

Since higher education has such a consistent effect on income, it is worthwhile to look at this phenomenon in more detail by examining, by field, salary levels for bachelor's degree and doctoral degree recipients (entry 5.26). Although the data for these two levels were collected in different years — 1978 and 1979 — both sets of income figures have been adjusted to 1980 levels. Again, the effect of educational level on income may be noted, although in this case, the large income differential between bachelor's degree recipients and doctoral degree recipients is also due to more work experience. Also notable, however, is that the magnitude of this effect of education on income seems to vary by field of degree. For example, the ratio of earnings of doctoral degree recipients to bachelor degree recipients in chemistry is about 2.2 to 1, whereas in engineering it is only about 1.6 to 1. Additionally, as might be anticipated, there are fairly large income differentials within a degree level, by major field of degree.

What can be concluded, after examining the accumulated evidence, about the effects of schooling on outcomes in the three domains considered — achievement, attitudes, and behavior? First, it can be unequivocally concluded that schools at all levels — elementary, secondary, and collegiate — are educating students in the basic skills of reading and mathematics. Secondly, schools influence attitudes that are directly concerned with the province of the school — attitudes toward subject-related skills and school itself, although the direction of the influence appears to be negative. For attitudes that are not directly concerned with school, schools appear to have little, if any, effect, although the tenor of the times in which these attitudes were expressed seem to make a difference. Finally, although the high school years have only a minor influence on the educational aspirations of students, and, in turn, their realization, the type and level of postsecondary education actually attained has a decided impact on employability and income.

Table 5.1

Percent of First Grade Students Who Had Preprimary Education, by Education of Adult Household Member, and Effects of Preprimary Education on Reading and Mathematics Achievement Scores of First Grade Students: 1976

Education of Adult in Household	Type of Program		
	Kindergarten	Preschool[1]	Day Care/Nursery School
	Percent Enrolled		
Male of household:			
5th grade or less	68.9	4.7	3.1
1 to 3 years of high school	80.3	4.4	7.3
High school graduate	87.8	6.2	9.8
Some college	89.8	10.4	12.3
College degree	93.7	17.1	17.3
Post-graduate	94.2	19.7	21.5
Female of household:			
5th grade or less	69.0	4.2	3.9
1 to 3 years of high school	78.9	4.8	6.1
High school graduate	86.8	6.8	10.0
Some college	91.0	12.8	17.1
College degree	94.4	20.6	19.4
Post-graduate	94.1	15.6	21.7

Type of Preprimary Education Program	Effects of Preprimary Programs on Achievement			
	Reading Scores[2]		Math Scores[2]	
	No Kindergarten	Kindergarten	No Kindergarten	Kindergarten
	Scores			
No Head Start	331.65	349.53	318.50	336.07
No day care/nursery school	333.65	348.99	320.12	335.47
No preschool[1]	333.50	348.59	320.18	334.64
Head Start	349.62	348.46	333.84	334.69
Day care/nursery school	324.43	353.87	312.60	341.04
Preschool[1]	324.64	350.30	308.67	346.64

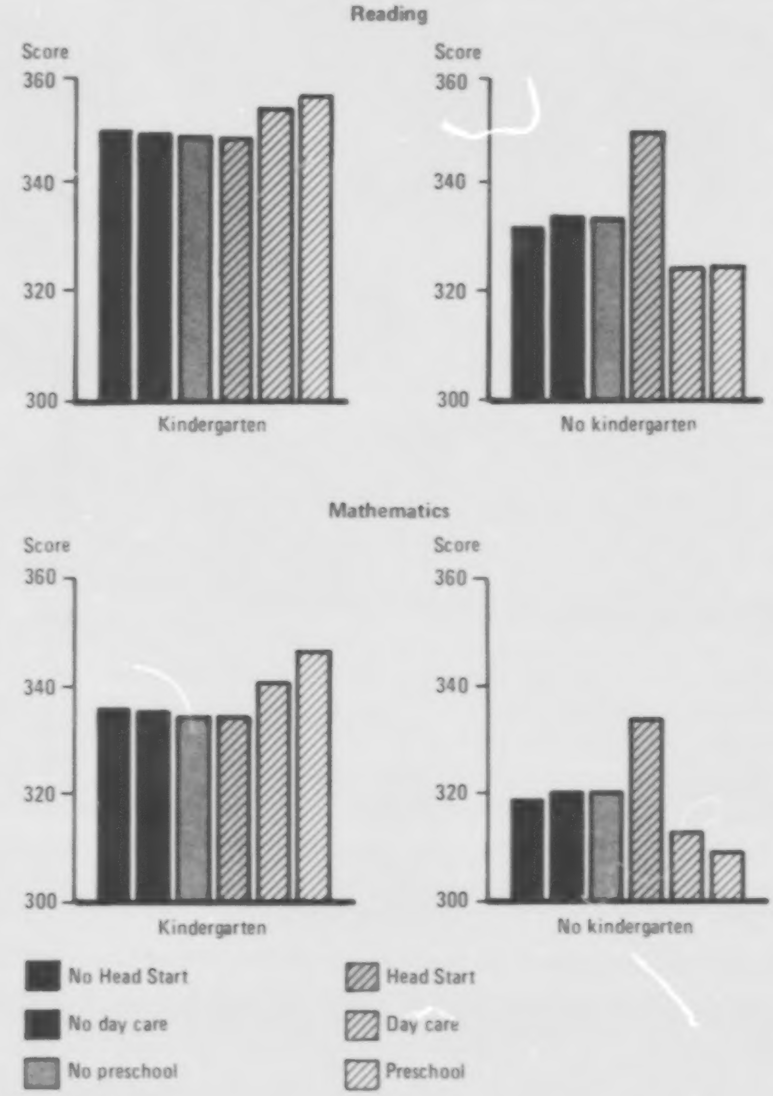
[1] Includes all preprimary education other than Head Start, day care, or nursery school.

[2] Scores are least square means adjusted for parental education, family income, race (white, other races), and participation in compensatory education.

Source: U.S. Office of Education, Office of Evaluation and Dissemination, Study of Sustaining Effects of Compensatory Education on Basic Skills, special tabulations.

Chart 5.1

Effects of Preprimary Education on Reading and Mathematics Achievement Scores of First Grade Students



Students who had participated in kindergarten performed significantly better in first grade on reading and mathematics tests than students who had not participated.

Table 5.2

Mean Reading and Mathematics Scores of Students in Grades 1 to 6, by Race and Grade Level: Fall and Spring 1976

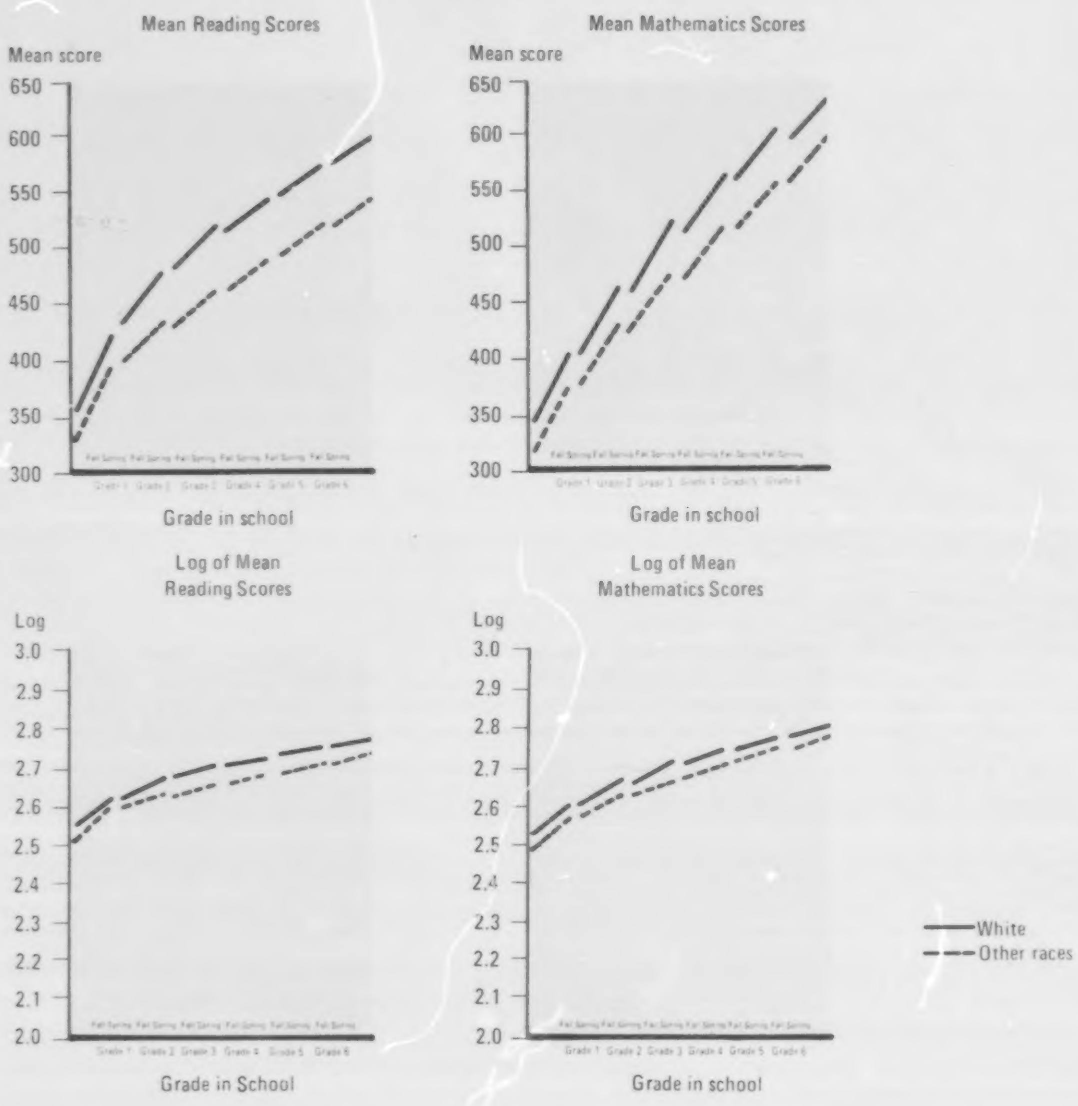
Race and Grade Level	Reading		Mathematics	
	Fall	Spring	Fall	Spring
	Mean Score[1]			
White:				
Grade 1	354.11	422.11	340.60	403.83
Grade 2	430.43	477.09	404.09	462.40
Grade 3	481.38	517.39	458.88	521.82
Grade 4	513.20	542.19	510.83	563.55
Grade 5	545.91	574.10	559.65	606.45
Grade 6	575.55	600.51	597.84	639.20
Other races:				
Grade 1	329.18	393.71	315.49	374.63
Grade 2	396.54	433.42	373.66	426.87
Grade 3	427.84	458.88	422.72	472.94
Grade 4	457.99	488.42	466.90	517.17
Grade 5	489.89	517.05	513.30	556.58
Grade 6	516.56	544.32	555.49	599.57

[1] Scores have been equated for each test by grade level so that they can be compared among the six grades.

Source: U.S. Office of Education, Office of Evaluation and Dissemination, Study of Sustaining Effects of Compensatory Education in Basic Skills, special tabulations.

Chart 5.2

Mean Reading and Mathematics Achievement Scores of Students in Grades 1 to 6



In the early years of elementary school (grades 1 to 3), a large degree of learning takes place in both reading and mathematics, while in the later years of elementary school, the rate of learning tends to slow down.

Table 5.3

Reading and Mathematics Achievement Scores of Students in Grades 1 to 6, by Educational Attainment of Adult in Household and Time in Instruction Per Day: Spring 1976

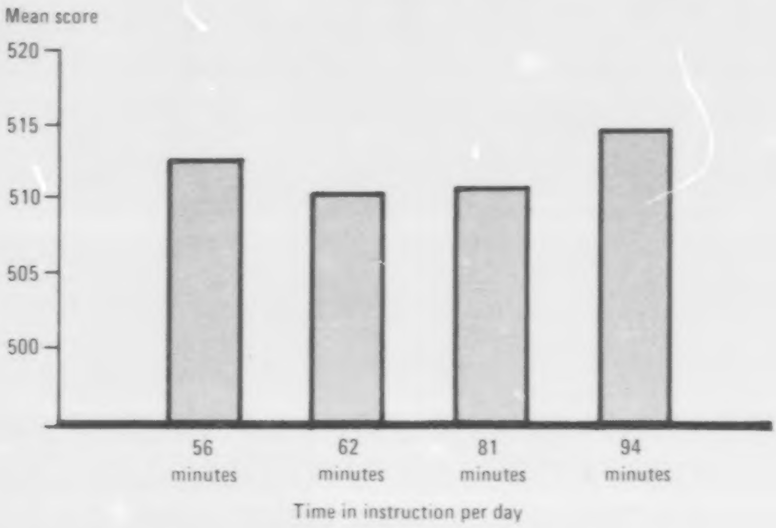
Item	Mean Reading Scores	Mean Mathematics Scores
Education of adult household member		
Male of household:		
8th grade or less	506.44	522.89
1 to 3 years of high school	508.30	523.34
High school graduate	512.14	525.79
Some college	514.20	526.77
College degree	518.29	529.35
Post-graduate	518.33	533.07
Female of household:		
8th grade or less	505.82	523.82
1 to 3 years of high school	510.49	522.37
High school graduate	513.44	525.61
Some college	515.34	530.68
College degree	515.24	530.58
Post-graduate	517.94	528.05
Time in instruction per day		
Reading:		
56 minutes	512.57	
62 minutes	510.43	
81 minutes	510.85	
94 minutes	514.77	
Mathematics:		
47 minutes		522.49
51 minutes		524.43
57 minutes		526.39
60 minutes		527.95

Source: U.S. Office of Education, Office of Evaluation and Dissemination, Study of Sustaining Effects of Compensatory Education on Basic Skills, special tabulations.

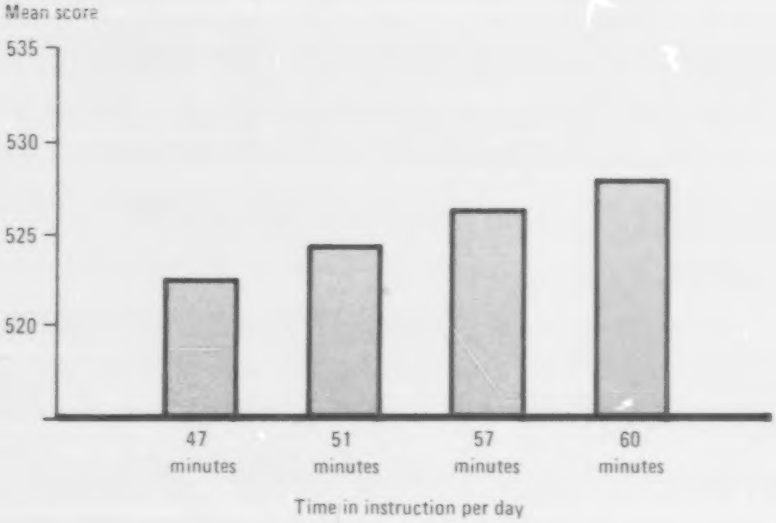
Chart 5.3

Effects of Time Spent in Reading and Mathematics Instruction on Achievement Scores

Reading



Mathematics



Time spent in mathematics classes had a slight effect on mathematics achievement of grade-school students; no effect was discernible from time spent in reading classes.

Table 5.4

Mean Reading Achievement Scores of Students in Grades 1 to 6 for Significant Instructional Groupings, by Time Spent in Instruction: Spring 1976

Time Spent in Instructional Grouping	Mean Reading Scores
*Classroom on special teacher, 7 to 13 students	
No time	512.79
Less than 10 percent	513.04
10 percent and over	515.46
*Independent work-program materials	
No time	511.74
Less than 4 percent	513.19
4 percent and over	513.67
*Classroom teacher, over 20 students	
No time	511.99
Less than 10 percent	514.28
10 to 19 percent	516.84
20 percent and over	517.75

Source: U.S. Office of Education, Office of Evaluation and Dissemination, Study of Sustaining Effects of Compensatory Education on Basic Skills, special tabulations.

Chart 5.4

Factors Contributing to Achievement on Spring Reading Scores

Factors Ranked by Order of Importance

Background Factors:

- **Fall reading scores***
- **Parental education***
- **Compensatory education***
- **Race***
- Family income

Instructional Grouping Factors:

- **Classroom/special teacher, 7 to 13 students***
- **Classroom teacher, over 20 students***
- **Independent work-program materials***
- Classroom/special teacher, 1 to 6 students
- Classroom teacher, 14 to 20 students
- Tutor

*Statistically significant effect on spring reading scores based on the results of a multiple regression analysis ($R^2 = .8503$).

Among instructional factors, small group instruction, large group instruction, and individual programmed instruction significantly contributed to reading scores.

Table 5.5

Mean Mathematics Achievement Scores of Students in Grades 1 to 6 for Significant Instructional Groupings, by Time Spent in Instruction: Spring 1976

Time Spent in Instructional Grouping	Mean Math Scores
*Classroom teacher, over 20 students	
No time	524.24
Less than 10 percent	519.87
10 to 19 percent	523.90
20 to 29 percent	523.44
30 percent and over	527.49
*Tutor	
No time	525.50
Less than 4 percent	519.58
4 percent and over	521.81

Source: U.S. Office of Education, Office of Evaluation and Dissemination, Study of Sustaining Effects of Compensatory Education on Basic Skills, special tabulations.

Chart 5.5

Factors Contributing to Achievement on Spring Mathematics Scores

Factors Ranked by Order of Importance

Background Factors:

- **Fall mathematics scores***
- **Parental education***
- Race*
- Compensatory education
- Family income

Instructional Grouping Factors:

- **Classroom teacher, over 20 students***
- **Tutor***
- Classroom teacher, 14 to 20 students
- Independent work-program materials
- Classroom/special teacher, 1 to 6 students
- Classroom teacher, 7 to 13 students

*Statistically significant effect on spring mathematics scores based on the results of a multiple regression analysis ($R^2 = .8651$).

Among instructional factors, large group instruction and tutoring contributed to mathematics scores, although time with a tutor was negatively associated.

Table 5.6

Mean Reading Performance of 9- and 13-Year-Olds on the Same 9 Exercises, and of 13- and 17-Year-Olds on the Same 44 Exercises, by Race: 1971, 1975, and 1980

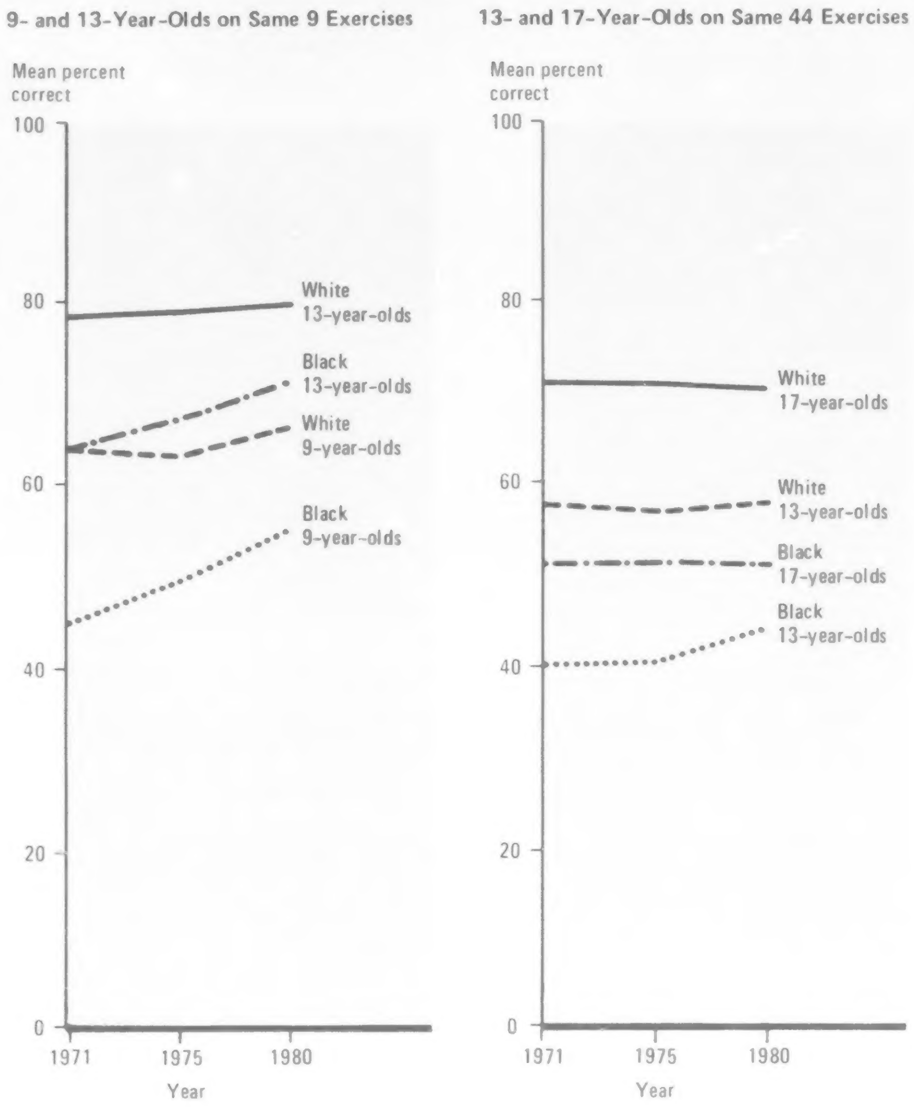
Year and Race	Same 9 Exercises			Same 44 Exercises		
	9-Year-Olds	13-Year-Olds	Yearly Progression Rate[1]	13-Year-Olds	17-Year-Olds	Yearly Progression Rate[1]
	Mean Percent Correct					
1971:						
White	63.7	78.2	5.3	57.6	70.9	5.3
Black	44.8	63.8	9.2	40.2	51.3	6.3
1975:						
White	63.1	78.6	5.6	56.9	70.9	5.7
Black	49.4	67.0	7.9	40.7	51.5	6.1
1980:						
White	66.2	79.5	4.7	57.9	70.3	5.0
Black	55.0	71.0	6.6	44.4	51.3	3.7

[1] Yearly progression rate in mean percent correct responses between younger and older age groups in determined by using the annual compound growth rate formula $r = \sqrt[t]{R_{t_1}/R_{t_0}} - 1$; where t = number of years difference in age (4), R_{t_1} = score for older age group, and R_{t_0} = score for younger age group.

Source: U.S. Department of Education, National Institute of Education, National Assessment of Educational Progress, *Three National Assessments of Reading: Changes in Performance, 1970-80*, April 1981.

Chart 5.6

Comparison Between Age Groups of Reading Performance on the Same Sets of Exercises


9- and 13-Year-Olds on Same 9 Exercises

13- and 17-Year-Olds on Same 44 Exercises

The gap in reading scores between white and black 9-year-olds closed substantially over the three assessments. Scores of black 13-year-olds also improved significantly from the earliest assessment, so that in the 1975 and 1980 assessments, their average score no longer overlapped that of white 9-year-olds on the same exercises.

Table 5.7

Mean Reading Performance of 9-, 13-, and 17-Year-Olds, by Sex, Race, Type of Community, and Parental Education: 1971 and 1980

Item	9-Year-Olds			13-Year-Olds			17-Year-Olds		
	Mean Percent Correct		Change 1971 to 1980	Mean Percent Correct		Change 1971 to 1980	Mean Percent Correct		Change 1971 to 1980
	1971	1980		1971	1980		1971	1980	
Sex:									
Male	61.65	66.05	**4.40**	57.75	58.84	**1.09**	67.17	66.86	**-0.31**
Female	66.28	69.74	**3.46**	62.29	62.61	**0.32**	70.65	69.66	**-0.99**
Race:									
White	66.44	69.26	**2.82**	62.60	62.64	**0.04**	71.24	70.57	**-0.67**
Black	49.70	59.57	**9.87**	45.44	49.61	**4.17**	51.68	52.20	**0.52**
Type of community:									
Rural	60.89	66.93	**6.04**	56.82	58.65	**1.83**	66.17	65.08	**-1.09**
Urban, disadvantaged[1]	52.76	57.96	**5.20**	49.83	53.40	**3.57**	60.68	59.24	**-1.44**
Urban advantaged[2]	71.57	73.14	**1.57**	67.14	67.93	**0.79**	75.75	73.53	**-2.22**
Parental education[3]:									
Less than 4 years of high school	56.75	60.78	4.03	52.70	52.88	0.18	60.50	59.20	-1.30
4 years of high school	64.69	67.12	2.43	60.40	59.52	-0.88	68.20	65.63	-2.57
More than 4 years of high school	70.08	71.53	1.45	66.42	65.44	-0.98	74.81	73.08	-1.75

[1] Cities having a population greater than 200,000 where a high proportion of the residents are on welfare or are not regularly employed.

[2] Cities having a population greater than 200,000 where a high proportion of the residents are in professional or managerial positions.

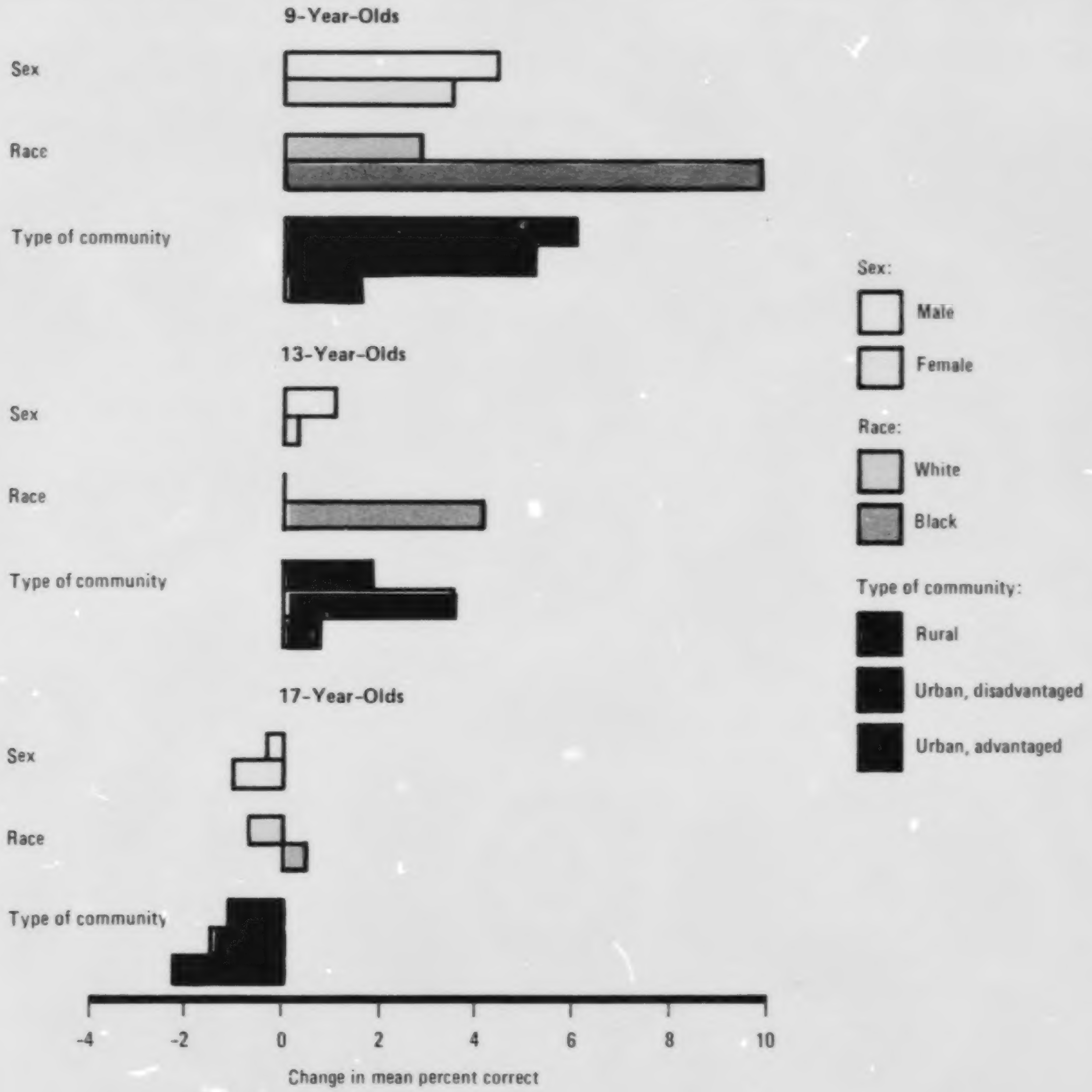
[3] Parental education levels are: (1) those whose parents did not graduate from high school, (2) those who have at least one parent who graduated from high school, and (3) those who have at least one parent who has had some post-high school education.

Note: Percent correct of identical reading items for assessments in 1971 and 1980.

Source: U.S. Department of Education, National Institute of Education, National Assessment of Educational Progress, *Three National Assessments of Reading: Changes in Performance, 1970-80*, April 1981.

Chart 5.7

Change in Reading Performance of 9-, 13-, and 17-Year-Olds: 1971 to 1980



Reading performances of 9- and 13-year-olds rose significantly during the 1970's. However, for all groups except blacks, the reading performance of 17-year-olds declined.

Table 5.8

Mean Percent Correct Responses of 9-, 13-, and 17-Year-Olds on the Same Mathematics Exercises, by Race: 1978

Race	9-Year-Olds	13-Year-Olds	Yearly Progression Rate[2]	13-Year-Olds	17-Year-Olds	Yearly Progression Rate[2]
	Mathematical Applications[1]					
	Same 33 Items			Same 83 Items		
All races	36.4	64.8	15.5	38.3	55.1	9.5
White	38.6	68.1	15.2	40.8	58.4	9.4
Black	26.7	48.5	16.1	25.6	35.3	8.4
	Mathematical Knowledge[1]					
	Same 78 Items			Same 120 Items		
All races	53.4	77.0	9.6	64.8	76.9	4.4
White	55.8	80.0	9.4	67.7	79.6	4.1
Black	42.9	62.2	9.7	50.7	60.9	4.7
	Mathematical Skills[1]					
	Same 98 Items			Same 218 Items		
All races	41.6	69.6	13.7	48.6	66.1	8.0
White	43.9	73.1	13.6	51.8	69.2	7.5
Black	30.6	51.9	14.1	32.4	47.2	9.9

[1] Assessment areas include the following cognitive abilities: Mathematical knowledge—ability to recall and recognize facts, definitions and symbols; mathematical skill—ability to perform mathematical computations, make measurements, read graphs and tables, perform geometric and algebraic manipulations and estimate answers to computations and measurements; mathematical application—ability to solve typical textbook problems, solve nonroutine problems, estimate answers, and use mathematics in reasoning and making judgements.

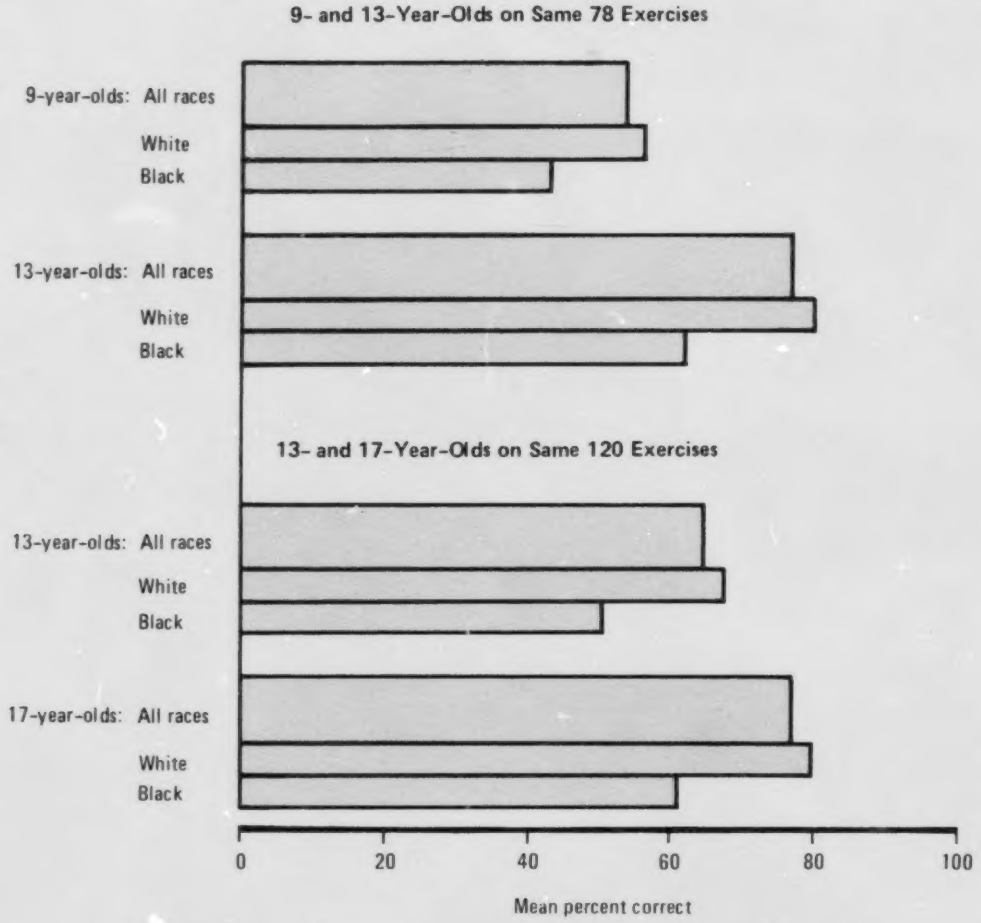
[2] Yearly progression rate in mean percent correct responses between younger and older age groups in determined by using the annual compound growth rate formula $r = \sqrt[t]{R_{t_1}/R_{t_0}} - 1$;

where t = number of years difference in age (4), R_{t_1} = score for older age group, and R_{t_0} = score for younger age group.

Source: U.S. Department of Education, National Institute of Education, National Assessment of Educational Progress, *Mathematical Knowledge and Skills: Selected Results from the Second Assessment of Mathematics,* Report No. 09-MA-02, August 1979, *Mathematical Applications: Selected Results from the Second Assessment of Mathematics,* Report No. 29-MA-03, August 1979.

Chart 5.8

Mathematical Knowledge of 9-, 13-, and 17-Year-Olds



Mathematical knowledge of black students was substantially lower than that of white students, although the extent of improvement from the younger group to the older group was not different between the races.

Table 5.9

Mean Mathematics Performance of 9-, 13-, and 17-Year-Olds, by Race, Type of Community, and Parental Education: 1973 and 1978

Characteristic	9-Year-Olds			13-Year-Olds			17-Year-Olds		
	1973	1978	Change	1973	1978	Change	1973	1978	Change
				Mean Percent Correct					
National average	38.1	36.8	**-1.3**	52.6	50.6	**-2.0**	51.7	48.1	**-3.6**
Race:									
White	41.1	39.1	**-2.0**	56.6	54.2	**-2.4**	54.5	51.0	**-3.5**
Black	23.4	26.3	**2.9**	31.8	32.4	**0.6**	33.5	30.9	**-2.6**
Type of community[1]:									
Disadvantaged urban	25.3	27.7	2.4	34.7	36.7	2.0	40.7	35.1	-5.7
Advantaged urban	46.6	46.0	-0.7	63.6	59.4	-4.2	59.5	57.3	-2.2
Extreme rural	34.0	32.1	-1.9	50.0	45.2	-4.8	48.4	46.4	-2.0
Parental education[2]:									
Not graduated from high school	31.1	28.7	-2.3	42.8	40.3	-2.5	42.5	37.7	-4.7
Graduated from high school	39.3	36.9	-2.4	52.1	49.6	-2.6	50.0	45.5	-4.6
Post high school	44.3	42.6	-1.7	60.8	58.2	-2.5	57.9	54.1	-3.8

[1] Communities are defined as one of three types: disadvantaged urban – cities with a population greater than 200,000 where a high proportion of the residents are on welfare or are not regularly employed; advantaged urban – cities with a population greater than 200,000 where a high proportion of the residents are in professional or managerial positions; and extreme rural – areas with a population under 10,000 where most of the residents are farmers or farm workers.

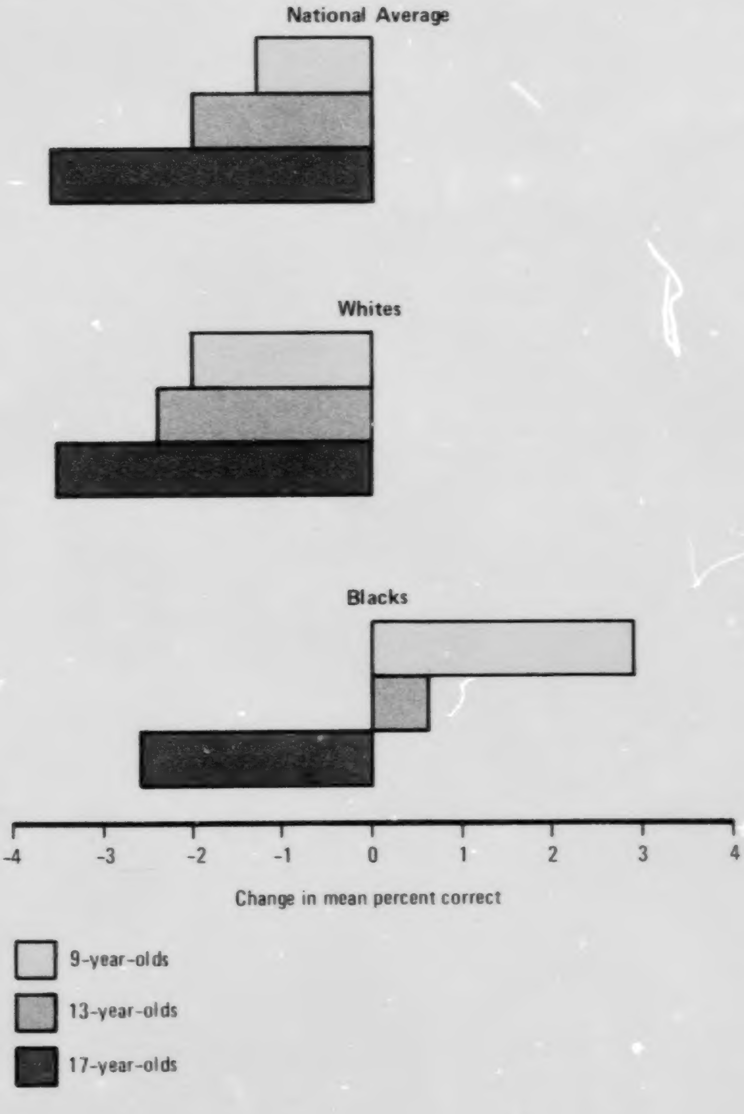
[2] Three levels of parental education are defined: Those whose parents did not graduate from high school; those who have at least one parent who graduated from high school; and those who have at least one parent with some post-high school education.

Note: Percent correct on identical mathematics items for assessments in 1973 and 1978.

Source: U.S. Department of Education, National Institute of Education, National Assessment of Educational Progress, *Mathematical Technical Report: Summary Volume,* April 1980.

Chart 5.9

Change in Mathematics Performance of 9-, 13-, and 17-Year-Olds: 1973 to 1978



While mathematical achievement test scores for 9-, 13-, and 17-year-olds fell nationally between 1973 and 1978, blacks' scores showed significant gains among the 9-year-olds.

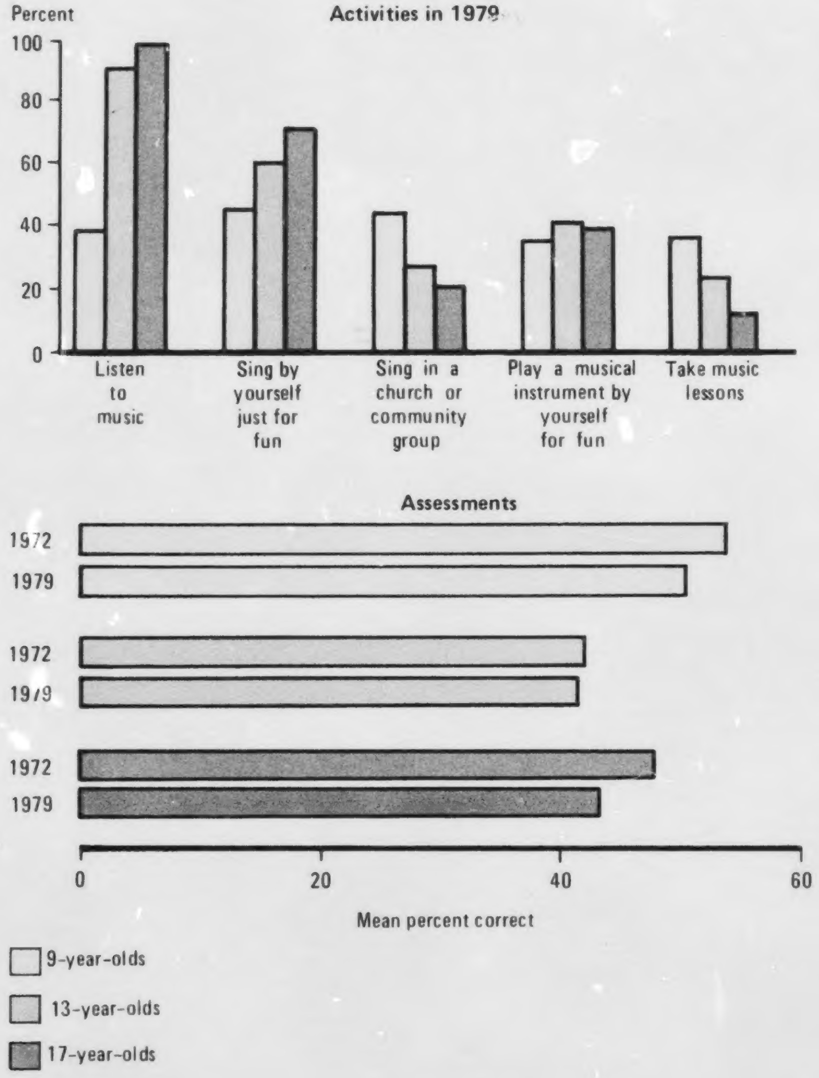
Table 5.10

Musical Activities in 1979 and Mean Music Assessment Performance of 9-, 13-, and 17-Year-Olds, by Age Group and Sex: 1972 and 1979

Item	9-Year-Olds			13-Year-Olds			17-Year-Olds		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
				Percent					
Musical activities in 1979:									
Listen to music	**38.3**	36.1	40.6	**90.3**	87.5	93.0	**98.5**	97.9	99.1
Sing by yourself just for fun	**45.3**	38.3	52.5	**60.1**	47.1	72.8	**71.2**	58.0	83.7
Sing with friends for fun	39.9	30.4	49.7	41.3	24.6	57.5	48.9	34.4	62.7
Sing in a church or community group	**43.6**	42.4	44.9	**26.8**	22.6	30.9	**20.3**	15.1	25.4
Play a musical instrument by yourself for fun	**35.3**	35.9	34.7	**40.3**	38.5	42.1	**39.2**	35.6	42.7
Play a musical instrument with friends for fun	26.2	26.0	26.4	22.5	22.0	23.0	21.6	22.1	21.0
Play a musical instrument in a community group	20.1	20.5	19.8	10.6	10.3	10.9	8.2	8.0	8.4
Take a music lesson	**36.3**	33.6	39.1	**23.0**	20.4	25.5	**11.9**	9.8	13.8
Make up your own music	50.3	47.4	53.4	36.7	36.1	37.2	28.3	30.0	26.7
Music assessments:									
1972, mean percent correct	**53.6**	52.9	54.3	**41.8**	40.4	43.2	**45.7**	44.4	46.9
1979, mean percent correct	**50.3**	49.9	51.0	**41.3**	40.2	42.4	**43.2**	41.6	44.7
Change, 1972 to 1979	-3.3	-3.0	-3.3	- .5	- .2	- .8	-2.5	-2.8	-2.3

Source: U.S. Department of Education, National Institute of Education, National Assessment of Educational Progress, *Music 1971-79: Results from the Second National Music Assessment*, November 1981.

Musical Activities and Assessments of 9-, 13-, and 17-Year-Olds



Music assessment scores declined significantly among 9-year-olds and 17-year-olds between 1972 and 1979. While most informal music activities appeared to increase from the youngest to the oldest age group, formal instruction appeared to decline with age.

Table 5.11

Mean Test Scores on Vocabulary and Reading Assessments of High School Seniors, Number of Years of English Taken, by Type of High School Program, Sex, and Socioeconomic Status: 1980

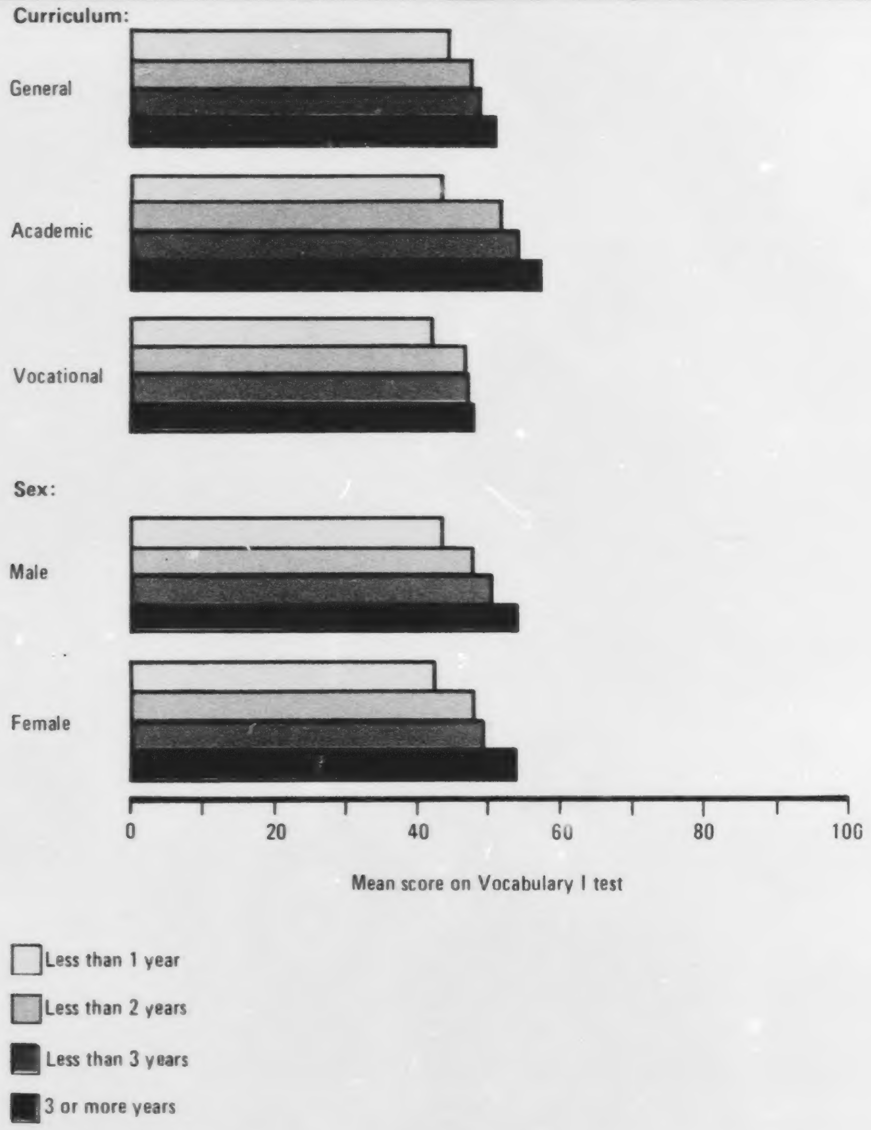
Characteristic	Number of Years of English			
	Less Than 1 Year	Less Than 2 Years	Less Than 3 Years	3 or More Years
	Mean Test Score[1]			
	Vocabulary I			
Type of high school program:				
General	**43.62**	**46.86**	**48.01**	**50.06**
Academic	**43.20**	**51.39**	**53.79**	**56.59**
Vocational	**42.03**	**46.70**	**46.88**	**47.57**
Sex:				
Male	**43.44**	**47.70**	**50.03**	**53.87**
Female	**42.26**	**47.47**	**48.93**	**53.38**
Socioeconomic status:				
Low	43.46	45.37	45.93	48.21
Middle	44.14	48.51	49.86	53.12
High	45.85	49.39	53.51	57.39
	Vocabulary II			
Type of high school program:				
General	44.07	47.18	48.26	49.96
Academic	43.42	52.28	53.92	56.09
Vocational	44.10	47.41	47.29	47.13
Sex:				
Male	45.53	48.60	51.00	54.56
Female	42.69	47.40	48.49	52.15
Socioeconomic status:				
Low	43.07	46.36	46.32	48.35
Middle	45.38	48.80	50.05	52.56
High	44.01	49.64	53.65	56.89
	Reading			
Type of high school program:				
General	42.40	47.05	48.36	50.03
Academic	43.32	52.79	54.60	56.36
Vocational	41.54	47.00	47.41	47.25
Sex:				
Male	42.37	48.18	50.60	53.79
Female	42.61	47.69	49.43	53.09
Socioeconomic status:				
Low	41.15	45.48	46.36	48.27
Middle	43.84	49.18	50.48	53.12
High	43.15	49.63	54.01	56.79

[1] Means exclude scores of students enrolled in remedial English or English as a second language.

Note: Scores are standardized to a mean of 50 points and a standard deviation of 10 points.

Source: U.S. Department of Education, National Center for Education Statistics, 1980 High School and Beyond Study, unpublished tabulations.

Vocabulary Test Scores of High School Seniors Related to Years of Coursework



Within academic and general curricular programs, additional years of English coursework were associated with higher vocabulary test scores.

Table 5.12

Mean Mathematics Test Scores of High School Seniors, by Number of Years of Mathematics Taken, Racial/Ethnic Group, Sex, and Socioeconomic Status: 1980

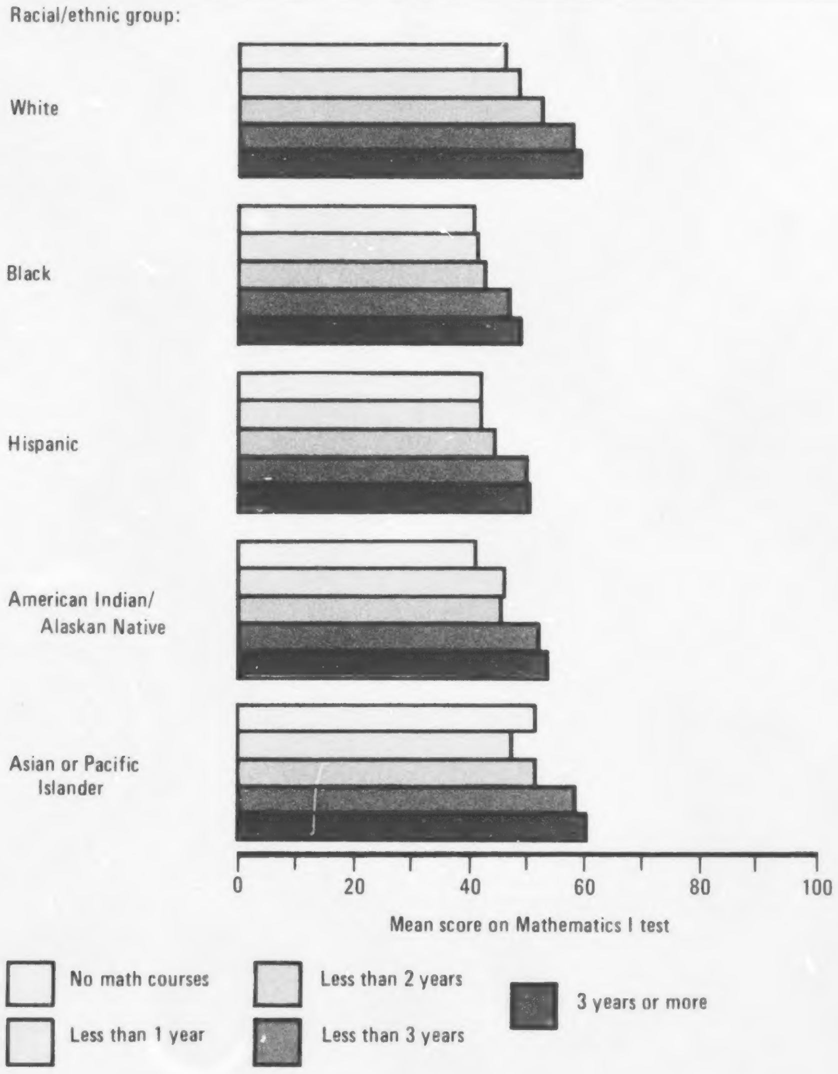
Characteristic	Mathematics Test I Scores[1]					Mathematics Test II Scores[1]				
	Number of Years of Mathematics Taken					Number of Years of Mathematics Taken				
	None	Less Than 1 Year	Less Than 2 Years	Less Than 3 Years	3 Years or More	None	Less Than 1 Year	Less Than 2 Years	Less Than 3 Years	3 Years or More
	Mean Test Score									
Racial/ethnic group:										
White	45.66	48.07	52.39	57.54	58.87	45.04	47.41	51.09	56.52	58.60
Hispanic	41.92	42.06	44.44	49.92	50.27	45.04	44.53	46.32	50.22	51.69
Black	40.51	41.13	42.62	46.80	48.88	42.71	43.60	45.50	47.49	49.90
American Indian or Alaskan Native	41.13	45.96	45.68	51.97	53.30	41.57	45.08	46.77	50.71	50.06
Asian or Pacific Islander	51.27	47.27	51.58	58.30	60.16	44.94	46.05	52.46	59.82	62.41
Sex:										
Male	45.19	47.85	51.41	57.45	58.39	45.45	47.62	50.72	56.69	58.24
Female	45.08	46.65	50.36	54.90	56.21	44.60	46.43	49.81	54.13	56.33
Socioeconomic status:										
Low	44.38	44.46	46.12	50.66	51.81	45.06	45.40	46.82	50.39	52.27
Middle	45.37	47.90	51.16	56.07	57.11	44.42	47.27	50.27	55.05	57.20
High	47.47	49.83	54.69	59.01	60.38	46.84	48.61	53.21	58.26	59.99

[1] Mathematics test I was designed to measure basic competence in quantitative skills, while mathematics test II measured the skills at a higher level. Because each set of test scores is standardized, comparisons can only be made within each test.

Note: Scores are standardized to a mean of 50 points and a standard deviation of 10 points.

Source: U.S. Department of Education, National Center for Education Statistics, 1980 High School and Beyond Study, unpublished tabulations.

Mathematics Test Scores of High School Seniors Related to Years of Coursework



Additional years of mathematics were associated with higher mathematics test scores, although white and Asian students with fewer years of math often performed better than other racial/ethnic groups with more years.

Table 5.13

Mean Mathematics Test Scores of High School Seniors, by Types of Mathematics Courses Taken and Racial/Ethnic Group: 1980

Characteristic	Algebra I Only		Algebra I and Geometry		Algebra I, Geometry, and Algebra II		Algebra I, Geometry, Algebra II, and Trigonometry		Algebra I, Geometry, Algebra II, Trigonometry, and Calculus	
	Math Test I	Math Test II	Math Test I	Math Test II	Math Test I	Math Test II	Math Test I	Math Test II	Math Test I	Math Test II
	Mean Test Score[1]									
White	**49.44**	48.30	**53.74**	52.23	**56.55**	55.02	**60.07**	59.21	**62.65**	62.64
Black	**41.85**	44.69	**46.63**	47.36	**48.90**	49.07	**53.46**	53.26	**55.59**	56.22
Hispanic	**44.39**	45.74	**49.08**	49.29	**51.06**	50.63	**54.09**	53.92	**59.59**	57.56
American Indian or Alaskan Native	**45.54**	45.70	**49.88**	49.95	**53.35**	51.95	**55.59**	53.20	**63.06**	59.36
Asian or Pacific Islander	**50.80**	51.30	**53.90**	54.97	**56.25**	58.10	**59.47**	60.50	**63.95**	63.98

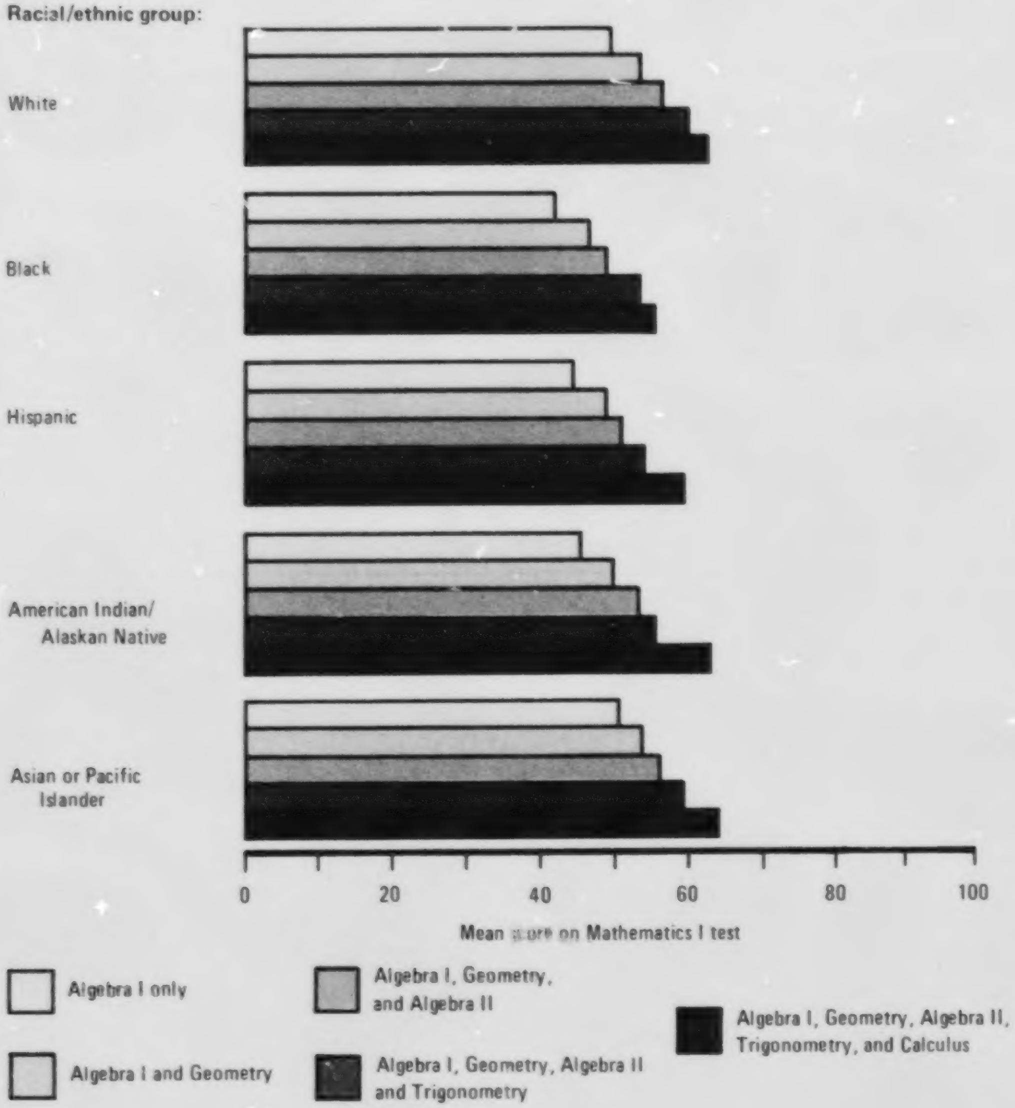
[1] Mathematics test I was designed to measure basic competence in quantitative skills, while mathematics test II measured the skills at a higher level. Because each set of test scores is standardized, comparisons can only be made within each test.

Note: Scores are standardized to a mean of 50 points and a standard deviation of 10 points.

Source: U.S. Department of Education, National Center for Education Statistics, 1980 High School and Beyond Study, unpublished tabulations.

Chart 5.13

Mathematics Test Scores of High School Seniors Related to Types of Courses Taken



Within each racial/ethnic group, high school seniors who had completed increasingly complex mathematics courses performed significantly better on the mathematics achievement test than students who had completed lower-level courses only.

Table 5.14

Vocabulary and Mathematics Achievement Test Scores of 1972 High School Seniors, by College Attainment, Race, and Sex: 1979

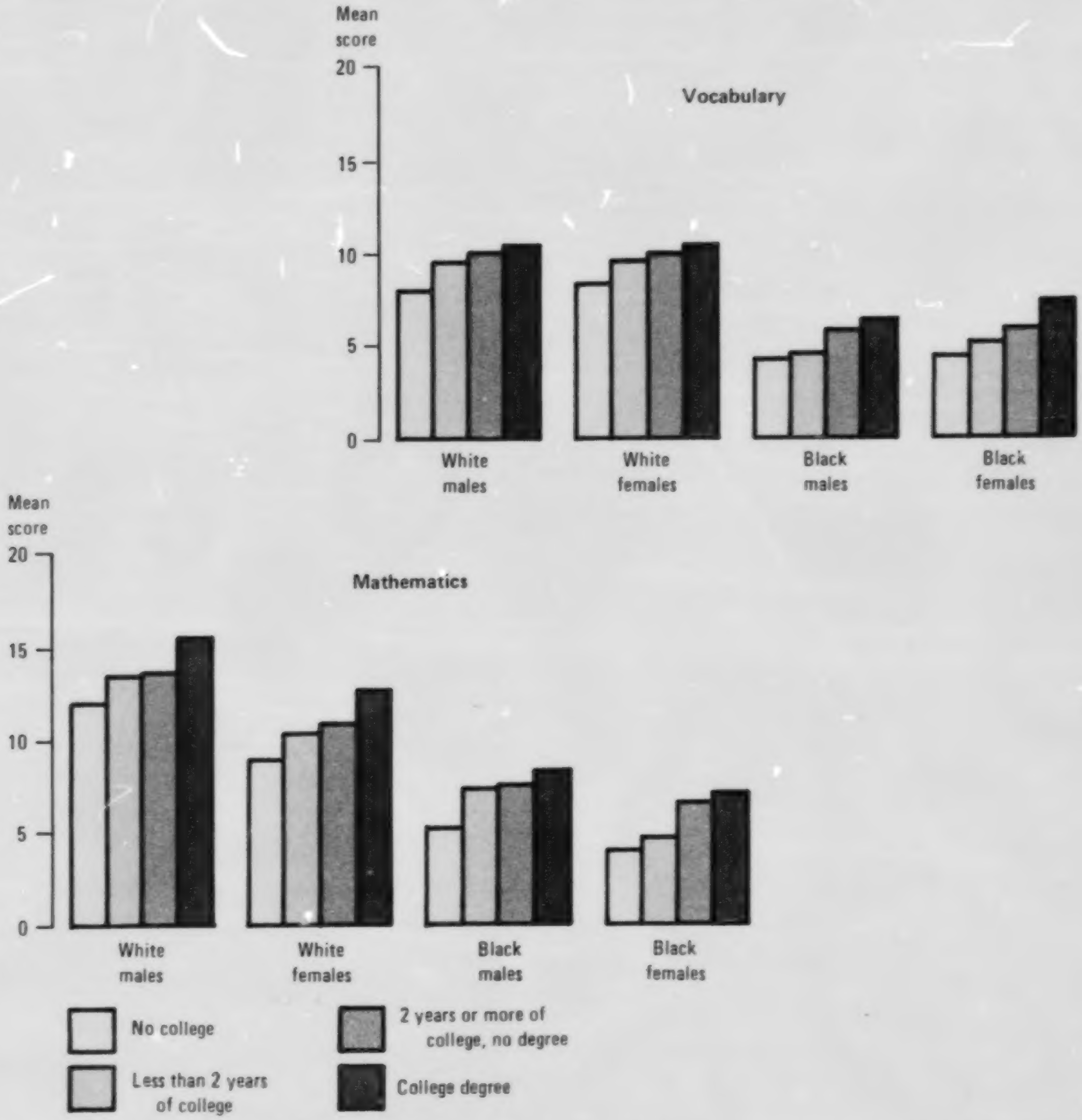
College Attainment	White Males		White Females		Black Males		Black Females	
	Vocabulary	Mathematics	Vocabulary	Mathematics	Vocabulary	Mathematics	Vocabulary	Mathematics
				Mean Test Score				
No college	8.04	11.77	8.39	8.74	4.22	5.12	4.30	3.91
Less than 2 years of college	9.56	13.28	9.61	10.15	4.50	7.18	5.12	4.59
2 years or more of college, no degree	10.05	13.45	10.03	10.61	5.76	7.38	5.85	6.48
College degree . . .	10.49	15.38	10.43	12.44	6.34	8.19	7.37	6.96

Note: Mean scores were adjusted for prior performance, using achievement test scores taken by individuals in 1972.

Source: U.S. Department of Education, National Center for Education Statistics, National Longitudinal Study of 1972, Fourth Follow-up, unpublished tabulations.

Chart 5.14

Achievement Test Scores of Young Adults Seven and One-Half Years After High School



Higher mathematics and vocabulary achievement test scores were associated with increasing levels of education. Mathematics scores for females were lower than for males, and blacks' scores were lower than whites' at each level of educational attainment.

Table 5.15

Attitudes of Students in Grades 1 to 6 Toward Reading, Mathematics, and School, by Race: Fall and Spring 1976

Race and Grade Level	Reading		Mathematics		School in General	
	Fall	Spring	Fall	Spring	Fall	Spring
	Mean Positive Responses[1]					
White:						
Grade 1	–	29.32	–	27.99	–	24.41
Grade 2	27.99	29.05	26.74	27.28	23.97	23.81
Grade 3	28.46	28.98	26.28	26.96	23.79	23.47
Grade 4	28.83	28.42	24.20	25.47	23.20	22.56
Grade 5	27.84	27.46	24.10	24.48	22.72	21.88
Grade 6	26.58	25.99	23.56	23.42	22.31	21.12
Other races:						
Grade 1	–	32.73	–	31.72	–	26.65
Grade 2	30.47	31.33	29.72	31.07	25.35	25.58
Grade 3	30.58	31.22	29.97	31.09	25.43	24.95
Grade 4	32.03	31.55	28.18	28.61	24.76	23.98
Grade 5	31.37	30.75	28.10	29.22	24.27	23.37
Grade 6	30.02	29.33	28.10	28.13	23.63	22.74

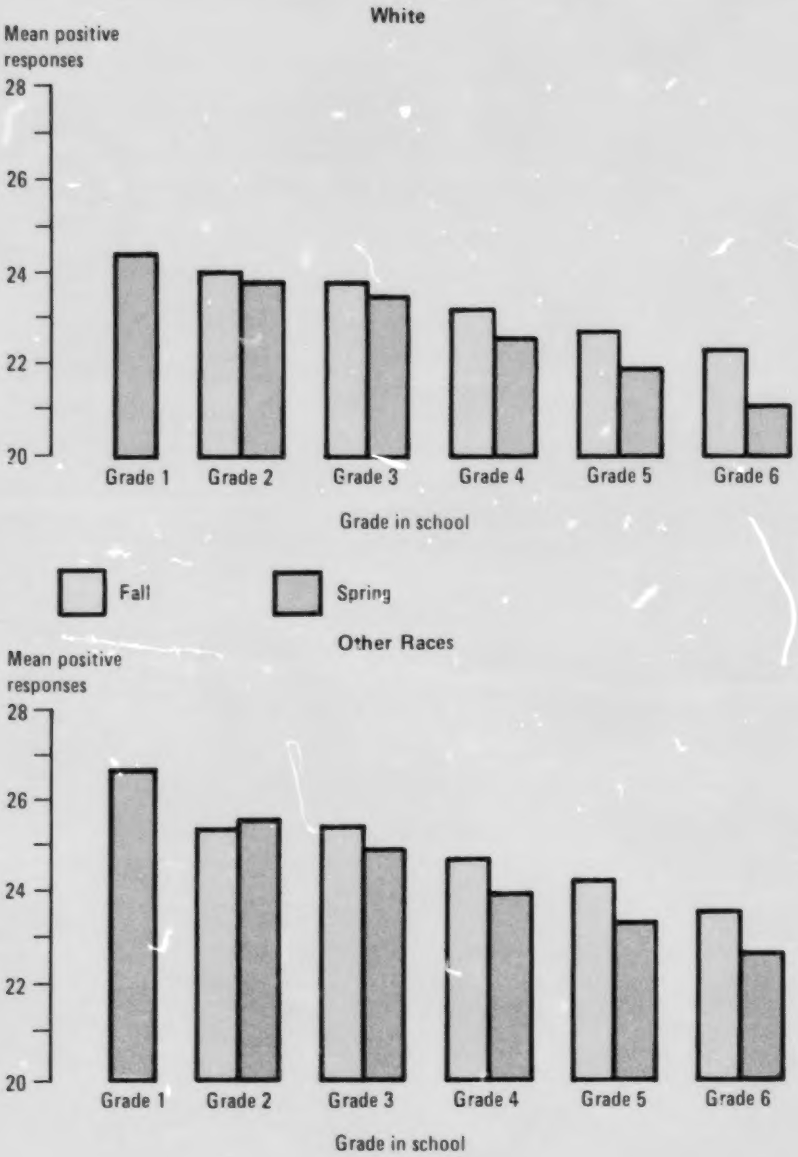
– Not available.

[1] Attitudes are based on the mean positive responses to 56 items of student affective measures.

Source: U.S. Office of Education, Office of Evaluation and Dissemination, Study of Sustaining Effects of Compensatory Education on Basic Skills, special tabulations.

Chart 5.15

Attitudes of Students in Grades 1 to 6 Toward School



Attitudes toward school exhibit a steady decline with increasing grade levels. While the attitudes of both blacks and whites declined, white students' attitudes are lower at each grade level.

Table 5.16

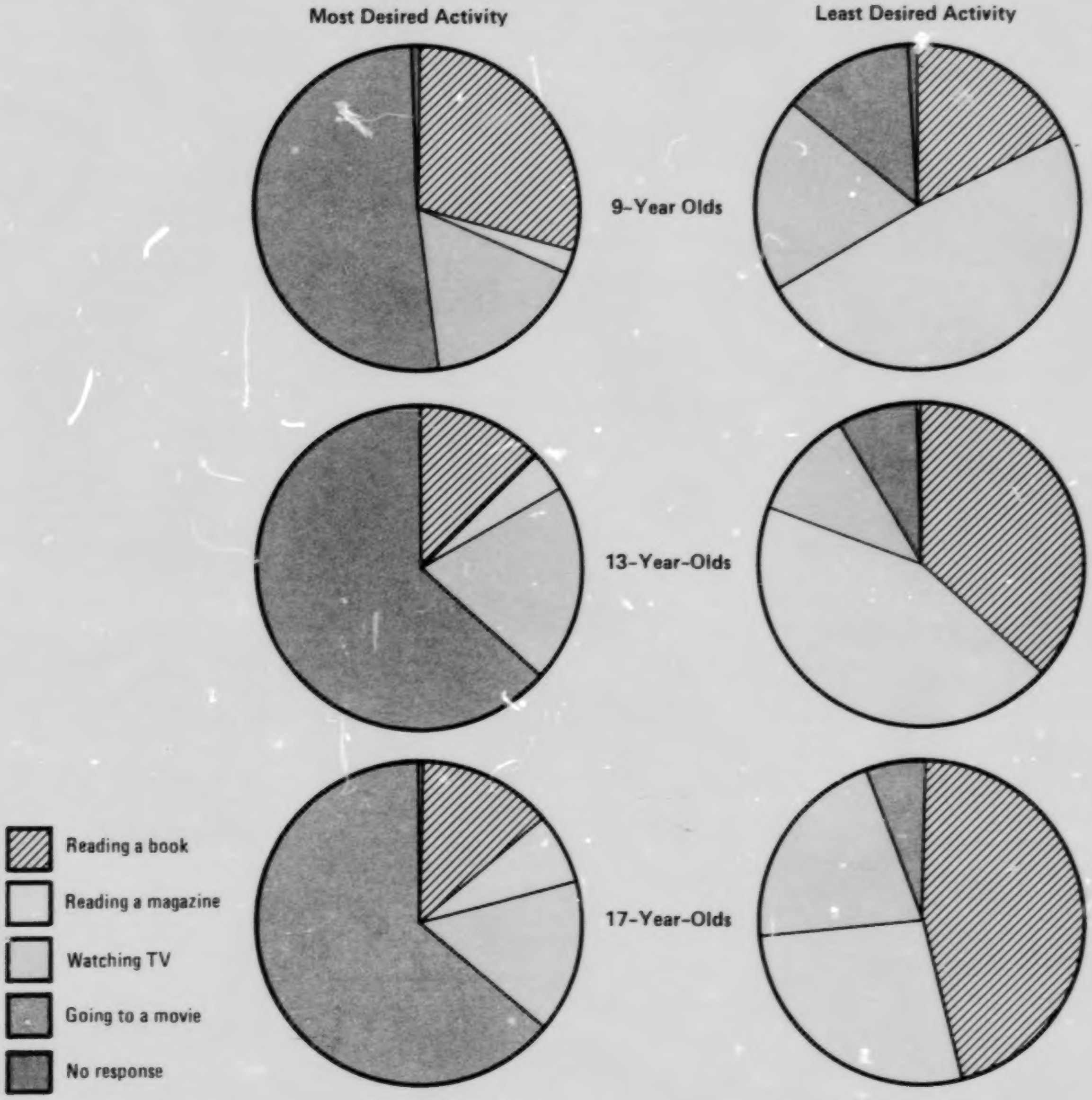
Reading Activities and Attitudes Toward Reading of 9-, 13- and 17-Year-Olds: 1980

Activity or Attitude	9-Year-Olds	13-Year-Olds	17-Year-Olds
		Percentage Distribution	
Enjoy reading, total	100.0	100.0	100.0
Very much	80.9	49.8	42.4
Somewhat	15.2	45.3	52.0
Not at all	3.2	4.6	5.3
No response	.7	.3	.3
Extent of reading for own enjoyment, total	100.0	100.0	100.0
Almost every day	53.6	35.4	32.7
Once or twice a week	28.4	35.9	32.3
Less than once a week	12.3	20.9	26.7
Never	5.3	7.6	7.9
No response	.3	.2	.4
Time per day spent reading for own enjoyment, total	100.0	100.0	100.0
3 or more hours	27.8	42.5	43.6
1 or 2 hours	27.8	29.8	32.2
Less than 1 hour	25.6	20.6	19.5
No time	12.5	5.8	4.2
No response	6.3	1.3	.4
Most desirable activity if given free time, total	100.0	100.0	100.0
Reading a book	29.1	12.6	13.4
Reading a magazine	2.3	4.1	7.1
Watching TV	16.3	20.2	15.4
Going to a movie	51.4	63.1	63.6
No response	.8	.1	.4
Least desirable activity if given free time, total	100.0	100.0	100.0
Reading a book	17.9	37.0	46.0
Reading a magazine	48.8	43.9	27.2
Watching TV	19.5	10.9	20.8
Going to a movie	13.0	7.8	5.9
No response	.8	.3	.1

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Education, National Institute of Education, National Assessment of Educational Progress, *Reading, Thinking, and Writing: Results from the 1979-80 National Assessment of Reading and Literature,* October 1981.

Most and Least Desired Activities of 9-, 13-, and 17-Year-Olds



Given sufficient free time, most children and teenagers would rather go to a movie than read a book. Among 17-year-olds, nearly 75 percent said that among activities listed, their least desirable activity was reading a book or a magazine.

Table 5.17

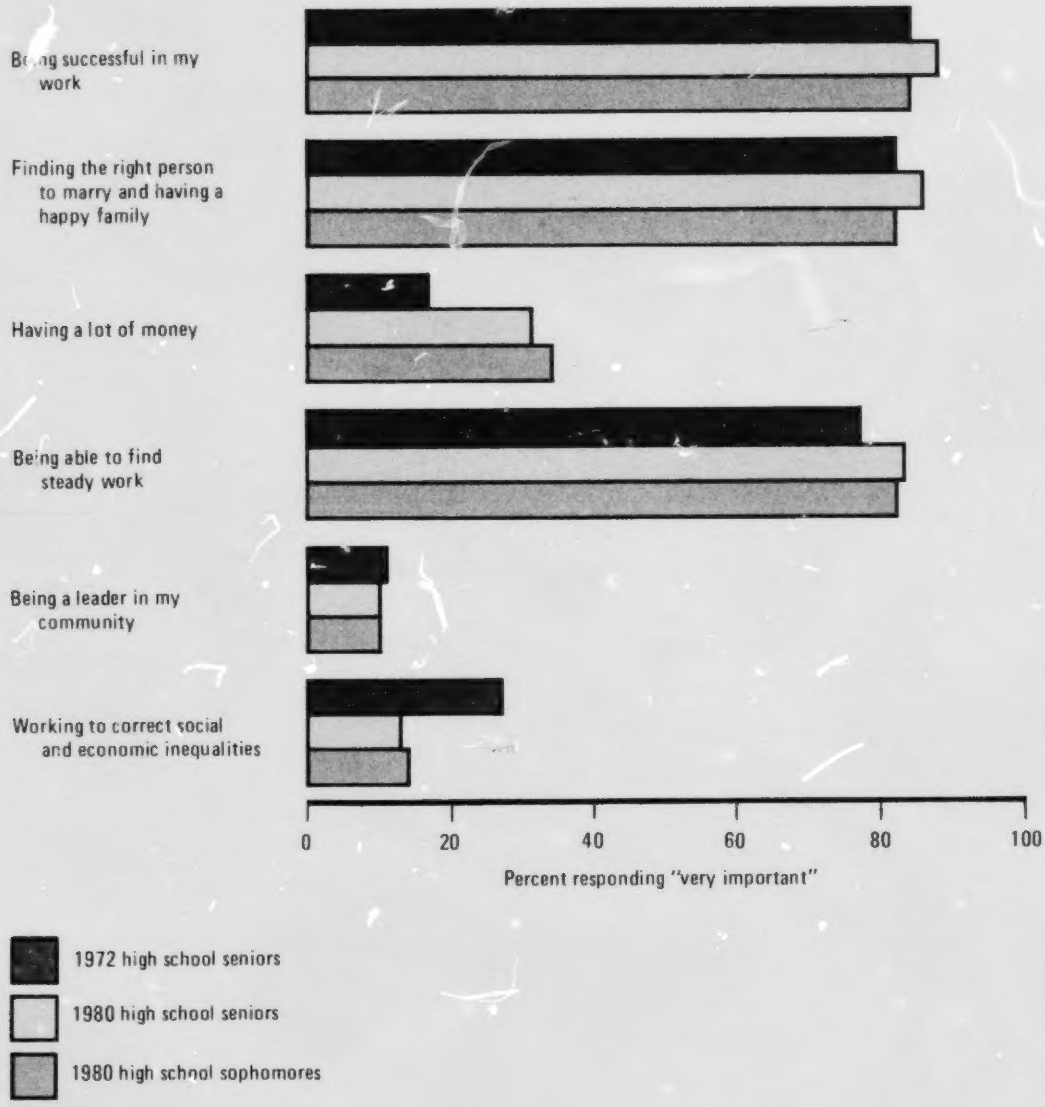
Importance of Life Goals of 1972 and 1980 High School Seniors and 1980 Sophomores, by Sex and Educational Attainment

Item	Life Goal					
	Being Successful in My Work	Finding the Right Person to Marry and Having a Happy Family Life	Having a Lot of Money	Being Able to Find Steady Work	Being a Leader in My Community	Working to Correct Social and Economic Inequalities
	Percent Responding "Very Important"					
1972 seniors						
In 1972	84	82	17	77	11	27
In 1979	75	87	16	69	6	14
1980 sophomores	84	82	34	82	10	14
1980 seniors	88	86	31	83	10	13
1972 male seniors						
No college						
In 1972	85	78	29	84	13	18
In 1979	77	88	21	82	6	10
Some college						
In 1972	85	79	24	81	15	25
In 1979	80	86	20	75	9	14
Bachelor's degree and higher						
In 1972	88	80	21	78	15	24
In 1979	83	85	19	71	11	14
1972 female seniors						
No college						
In 1972	80	88	10	78	6	25
In 1979	62	90	10	58	4	12
Some college						
In 1972	84	85	10	73	8	33
In 1979	72	85	13	61	4	15
Bachelor's degree and higher						
In 1972	84	82	8	63	11	38
In 1979	80	86	11	67	6	18

Source: U.S. Department of Education, National Center for Education Statistics, *A Capsule Description of Young Adults Seven and One-Half Years after High School,* NCES 81-255, August 1981, and 1980 High School and Beyond Study, unpublished tabulations.

Chart 5.17

Importance of Life Goals for 1972 and 1980 High School Seniors and 1980 Sophomores



Almost twice as many 1980 seniors said that "having lots of money" was very important to them than did 1972 seniors. "Working to correct social and economic inequalities" was very important to fewer seniors in 1980 than in 1972.

Table 5.18

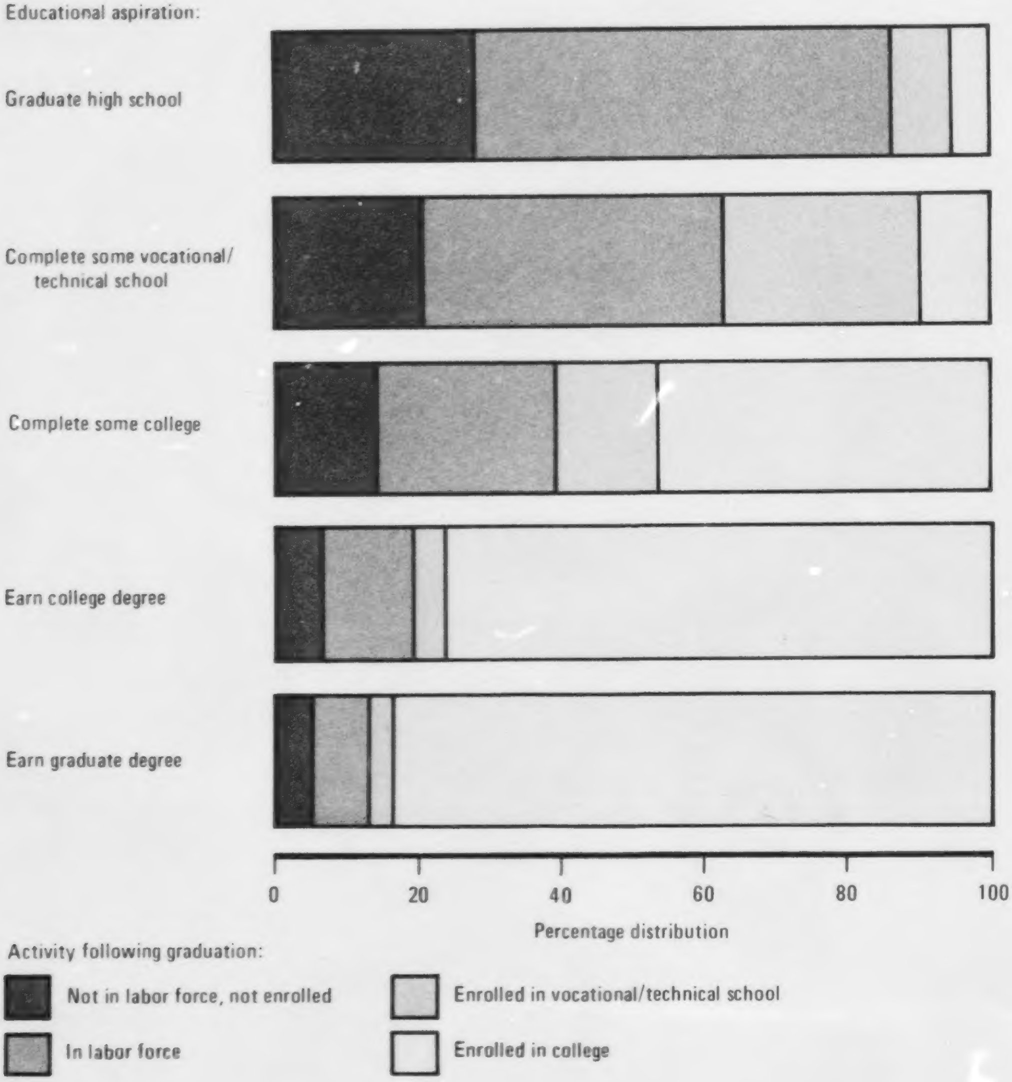
Labor Force and Educational Activities of 1972 High School Seniors Following Graduation, by Educational Aspiration

Activity	Graduate High School	Complete Some Vocational/ Technical School	Complete Some College	Earn College Degree	Earn Graduate Degree
	Percent				
Total:	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Not in labor force, not enrolled	**27.8**	**20.6**	**14.6**	**6.7**	**5.4**
In labor force	**58.5**	**42.3**	**24.9**	**12.5**	**7.9**
Looking for work	6.3	4.1	2.7	1.5	1.1
Working part-time	20.7	13.8	8.7	3.9	2.9
Working full-time	31.5	24.4	13.5	7.1	3.9
Attending vocational/ technical school	**8.6**	**27.5**	**14.1**	**4.5**	**3.5**
Attending college	**5.1**	**9.6**	**46.5**	**76.4**	**83.1**

Note: Details may not add to totals because of rounding.

Source: U.S. Department of Education, National Center for Education Statistics, National Longitudinal Study of the High School Class of 1972, unpublished tabulations.

Activities of 1972 High School Seniors Following High School Graduation, by Educational Aspiration



A high proportion of seniors who aspired to college entered college immediately after completing high school.

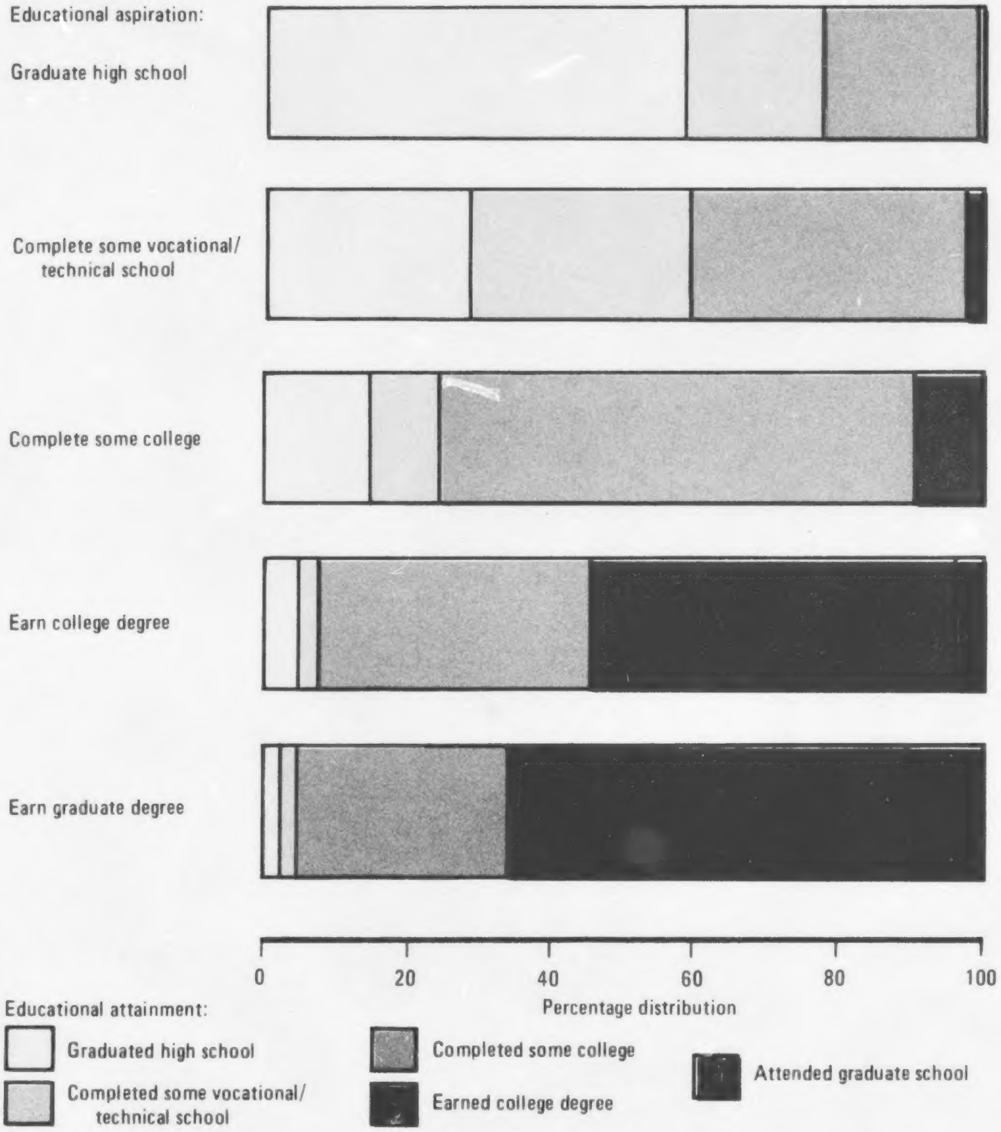
Table 5.19

Educational Attainment of 1972 High School Seniors Seven and One-Half Years After Graduation, by Initial Educational Aspirations, Sex and Race: 1979

Educational Attainment	Educational Aspiration				
	Graduate High School	Complete Some Vocational/ Technical School	Complete Some College	Earn College Degree	Earn Graduate Degree
	Percentage Distribution				
Total:	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Graduated high school	**58.4**	**28.3**	**14.8**	**4.8**	**2.5**
Completed some vocational/ technical school	**19.4**	**30.9**	**9.6**	**2.8**	**2.2**
Completed some college	**21.4**	**38.4**	**66.4**	**38.0**	**29.4**
Earned college degree	**.7**	**2.2**	**8.8**	**50.8**	**55.6**
Attended graduate school	**.0**	**.3**	**.3**	**3.8**	**10.4**
Males:	100.0	100.0	100.0	100.0	100.0
Graduated high school	53.6	27.2	14.0	5.3	1.8
Completed some vocational/ technical school	23.3	33.4	11.4	3.8	1.9
Completed some college	22.2	36.9	63.5	40.0	30.3
Earned college degree	.9	2.2	10.9	47.7	54.9
Attended graduate school	.0	.4	.2	3.2	11.0
Females:	100.0	100.0	100.0	100.0	100.0
Graduated high school	61.8	29.5	15.5	4.2	3.6
Completed some vocational/ technical school	16.7	28.2	8.2	1.7	2.7
Completed some college	20.9	39.9	68.8	35.9	27.8
Earned college degree	.6	2.3	7.1	53.8	56.7
Attended graduate school	.0	.1	.4	4.3	9.2
White:	100.0	100.0	100.0	100.0	100.0
Graduated high school	58.8	26.3	13.9	4.0	1.7
Completed some vocational/ technical school	19.6	32.6	9.1	2.5	1.6
Completed some college	21.1	38.1	67.1	35.6	26.9
Earned college degree	.5	2.7	9.6	53.8	57.9
Attended graduate school	.0	.2	.4	4.2	11.9
Other races:	100.0	100.0	100.0	100.0	100.0
Graduated high school	57.2	33.8	18.4	8.5	5.0
Completed some vocational/ technical school	18.7	26.1	11.6	4.1	4.4
Completed some college	22.7	39.0	63.7	49.1	37.9
Earned college degree	1.4	.8	6.1	36.7	47.7
Attended graduate school	.0	.4	.2	1.6	5.0

Source: U.S. Department of Education, National Center for Education Statistics, National Longitudinal Study of the High School Class of 1972: First through Fourth Follow-Ups, unpublished tabulations.

Attainment of 1972 High School Seniors, by Initial Educational Aspiration



Almost all 1972 high school seniors who aspired to college in high school had actually attained some college 7½ years after high school graduation.

Table 5.20

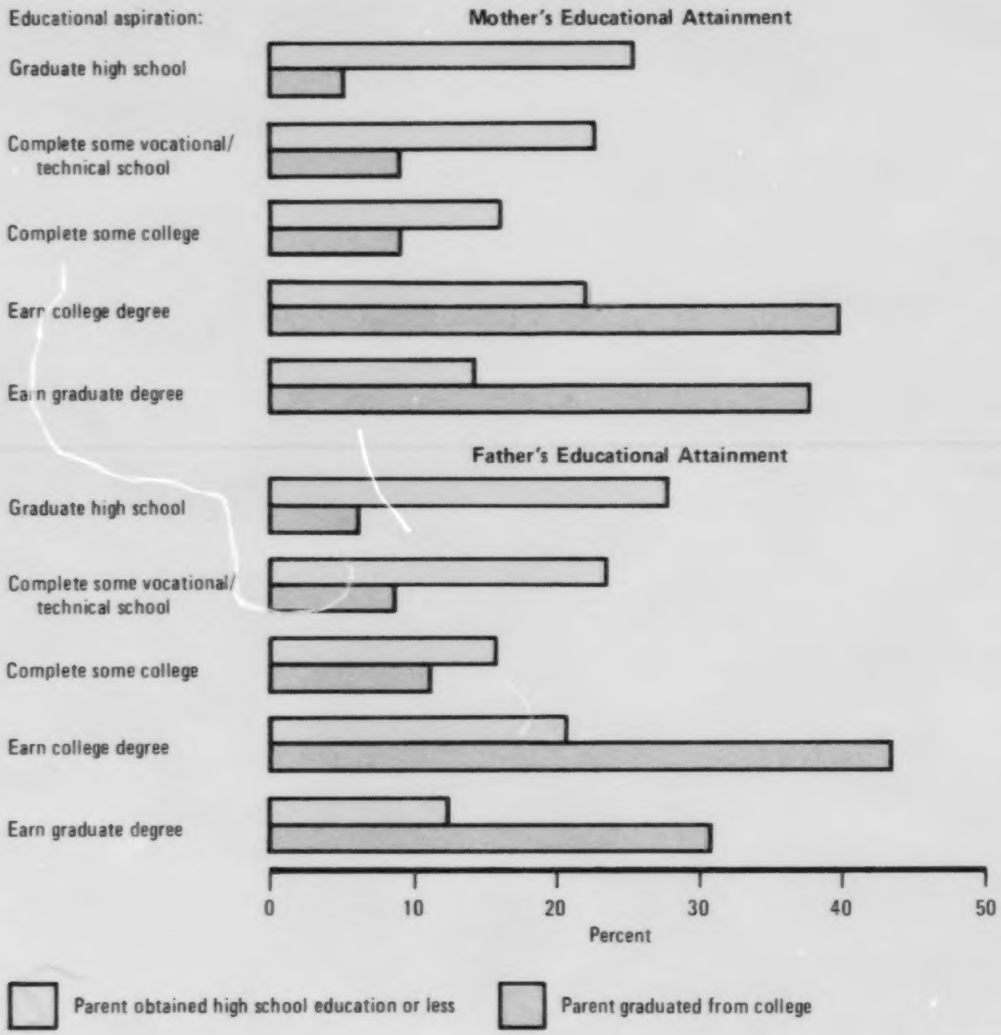
Educational Aspirations of 1980 High School Seniors, by Educational Attainment of Parents: 1980

Parental Education	Educational Aspiration					
	Total	High School or Less	Some Vocational/ Technical School	Some College	Graduate College	Earn Graduate Degree
	Percentage Distribution					
Mother's education:						
Total	100.0	18.4	19.1	15.2	26.2	21.3
High school or less	100.0	**25.4**	**22.7**	**16.1**	**21.7**	**14.1**
Some vocational/technical school	100.0	8.8	22.3	16.7	29.6	22.8
Some college	100.0	8.2	12.3	16.9	33.9	28.7
College graduate	100.0	**5.9**	**9.1**	**9.0**	**39.5**	**37.7**
Graduate degree	100.0	4.9	6.7	7.5	28.1	52.8
Father's education:						
Total	100.0	18.3	18.8	14.7	26.7	21.5
High school or less	100.0	**27.7**	**23.5**	**15.7**	**20.7**	**12.4**
Some vocational/technical school	100.0	14.6	27.8	15.8	24.1	17.8
Some college	100.0	9.1	13.6	19.7	33.3	24.3
College graduate	100.0	**6.1**	**8.7**	**11.1**	**43.4**	**30.7**
Graduate degree	100.0	3.3	6.5	8.2	29.9	50.2

Source: U.S. Department of Education, National Center for Education Statistics, 1980 High School and Beyond Study, unpulished tabulations.

Chart 5.20

Educational Aspirations of 1980 High School Seniors, by Parental Education



High school seniors tended to aspire to educational levels as high or higher than those achieved by their parents.

Table 5.21

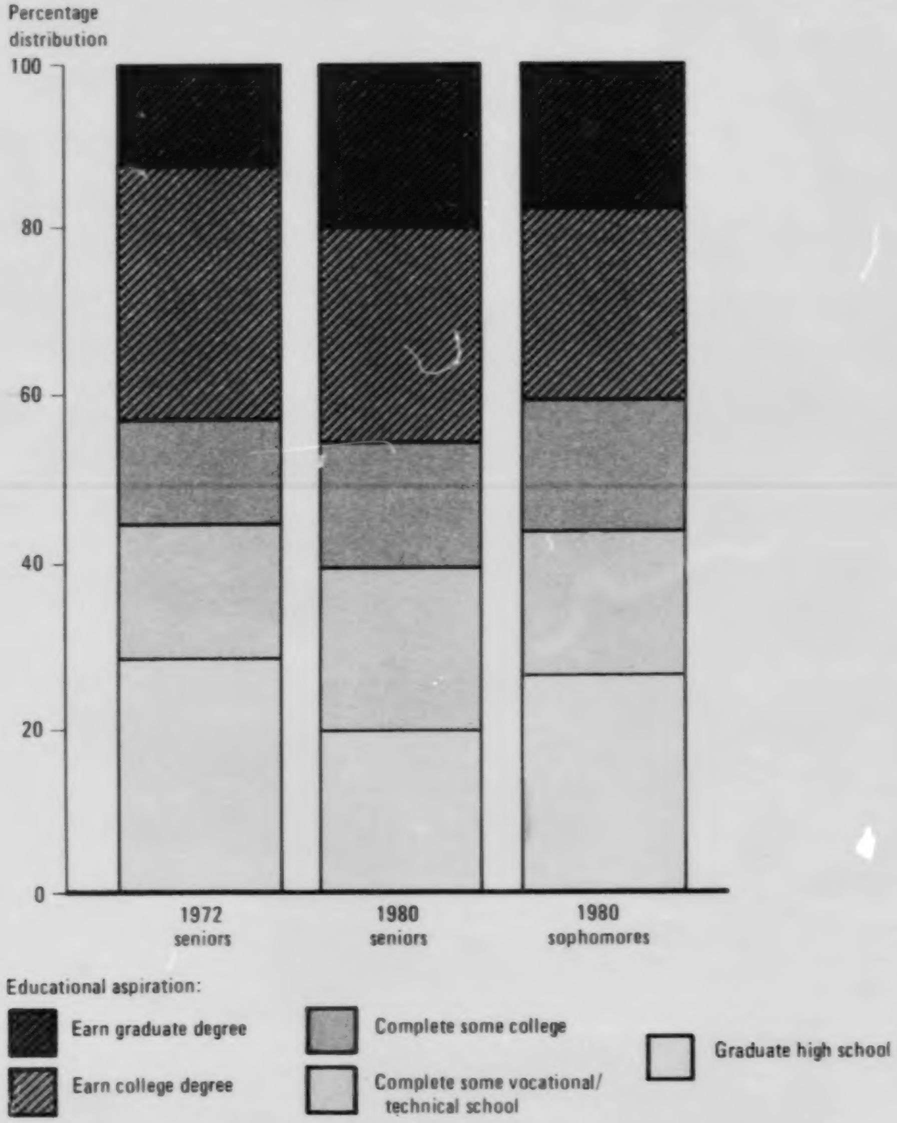
Educational Aspirations of High School Seniors in 1972 and 1980 and Sophomores in 1980, by Sex, Racial/Ethnic Group, and Aspirations of Peers

Educational Aspiration	Total	Sex		Racial/Ethnic Group			Aspirations of Peers	
		Male	Female	White	Black	Hispanic	Going to College	Not Going to College
						Percent		
Graduate high school:								
1972 seniors	**28.6**	24.6	33.0	29.3	27.8	34.0	15.0	48.3
1980 seniors	**19.8**	21.0	18.2	20.1	17.0	25.0	11.5	38.0
1980 sophomores ...	**26.5**	28.1	23.5	25.9	26.3	33.5	14.5	47.1
Complete some vocational/technical school:								
1972 seniors	**15.9**	16.5	15.3	14.2	20.4	17.2	11.2	21.1
1980 seniors	**19.6**	20.1	18.9	19.2	21.5	21.3	15.5	28.6
1980 sophomores ...	**17.3**	18.2	16.4	17.5	17.1	17.1	13.9	23.3
Complete some college:								
1972 seniors	**12.4**	11.9	12.9	12.1	9.7	14.6	12.8	10.4
1980 seniors	**15.1**	11.7	18.1	15.1	13.9	17.8	15.8	13.7
1980 sophomores ...	**15.6**	13.4	17.7	15.6	15.4	16.7	18.0	11.2
Earn college degree:								
1972 seniors	**30.3**	31.6	29.1	31.7	26.4	23.3	42.8	14.9
1980 seniors	**25.3**	26.0	25.1	26.0	24.3	19.5	31.3	12.3
1980 sophomores ...	**22.7**	22.4	23.7	23.4	22.1	17.1	29.7	10.6
Earn graduate degree:								
1972 seniors	**12.5**	15.5	9.7	12.6	15.7	11.0	18.2	5.3
1980 seniors	**20.2**	21.2	19.8	19.6	23.2	16.8	25.9	7.4
1980 sophomores ...	**17.9**	18.0	18.7	17.7	19.1	15.7	23.8	7.9

Source: U.S. Department of Education, National Center for Education Statistics, unpublished tabulations from the National Longitudinal Study of the High School Class of 1972 and the 1980 High School and Beyond Survey.

Chart 5.21

Educational Aspirations of 1972 and 1980 High School Seniors and 1980 Sophomores



There was very little difference between the educational aspirations of sophomores and seniors in 1980. Seniors in 1980 tended to have higher educational aspirations than seniors in 1972.

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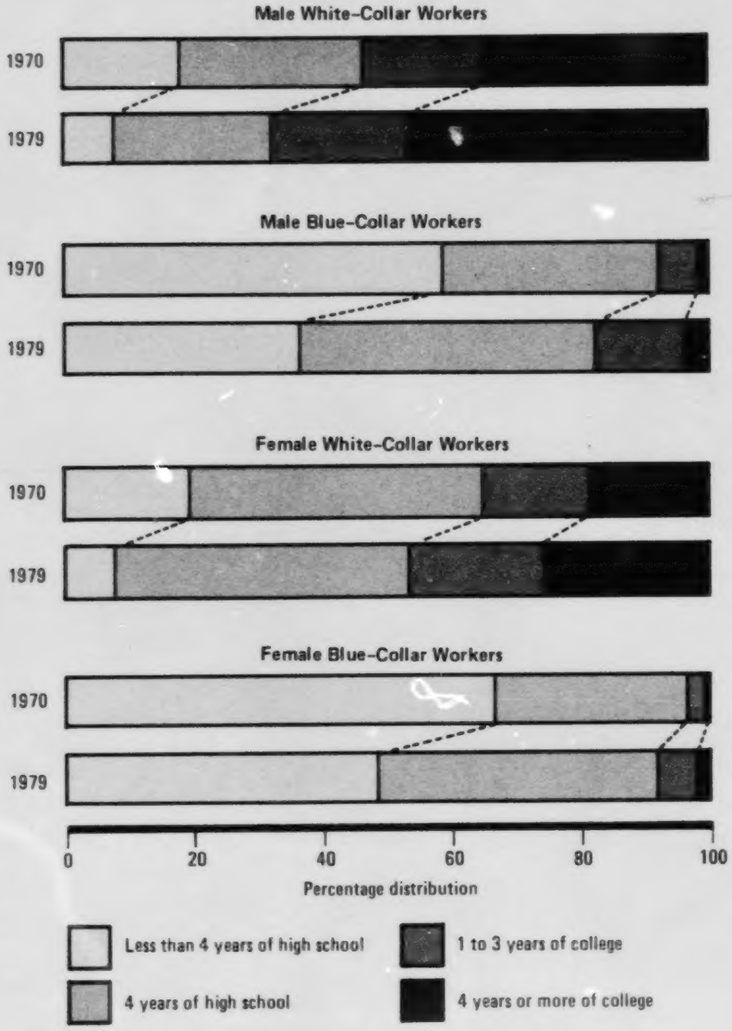
Table 5.22

Educational Attainment of Workers 25 Years Old and Over, by Sex and Occupational Group: 1970 and 1979

Sex and Occupation	Total Employed		Educational Attainment							
			Less Than 4 Years of High School		4 Years of High School		1 to 3 Years of College		4 Years or More of College	
	1970	1979	1970	1979	1970	1979	1970	1979	1970	1979
	Number, in Thousands		Percent							
Male, total	40,889	44,154	42.3	23.6	30.7	35.3	11.6	17.2	15.4	23.9
White-collar workers	16,863	20,434	**18.0**	**7.7**	**28.4**	**24.8**	**18.9**	**21.0**	**34.7**	**46.5**
Professional and technical workers	6,141	7,802	6.0	2.0	16.3	11.1	17.2	16.2	60.5	70.6
Managers and administrators	5,107	7,356	22.6	11.3	32.1	30.5	19.7	22.2	25.6	35.9
Sales workers	2,789	2,658	23.8	8.7	35.0	31.6	22.0	26.9	19.2	32.8
Clerical workers	2,826	2,618	29.5	12.9	41.8	42.8	18.4	25.8	10.3	18.5
Blue-collar workers	19,166	18,829	**59.2**	**36.7**	**33.0**	**45.8**	**6.2**	**13.8**	**1.6**	**3.6**
Craft workers	9,242	9,583	52.1	30.3	37.7	48.7	8.0	16.4	2.2	4.6
Operatives, except transport	5,236	4,538	62.4	40.6	31.5	45.2	5.0	11.7	1.1	2.4
Transport equipment operatives	2,466	2,610	64.8	43.9	29.8	41.6	4.6	11.4	0.9	3.0
Laborers	2,223	2,098	72.2	48.4	22.7	39.2	4.0	10.0	1.1	2.4
Service workers	2,994	3,210	58.8	36.0	30.1	39.5	8.5	16.8	2.6	7.7
Farmers and farmworkers	1,869	1,681	65.1	46.9	26.1	35.8	5.7	9.6	3.2	7.7
Female, total	23,249	30,283	37.8	20.2	30.3	44.9	11.4	17.1	11.4	17.8
White-collar workers	13,748	19,858	**19.2**	**7.7**	**45.7**	**45.6**	**16.5**	**21.1**	**18.6**	**25.6**
Professional and technical workers	3,784	5,603	6.7	2.2	19.7	15.4	19.1	19.1	54.2	63.3
Managers and administrators	1,000	2,190	27.0	10.9	42.5	42.6	16.7	22.3	13.9	24.2
Sales workers	1,688	1,868	38.8	17.6	46.8	52.0	10.8	19.1	3.6	11.3
Clerical workers	7,276	10,197	20.0	8.0	59.4	61.7	16.4	22.4	4.2	7.9
Blue-collar workers	4,493	4,485	**66.4**	**48.2**	**29.9**	**43.4**	**3.0**	**6.1**	**0.7**	**2.3**
Craft workers	465	556	52.5	33.6	37.8	46.0	7.3	13.1	2.4	7.2
Operatives, except transport	3,681	3,398	68.7	52.6	28.4	41.7	2.4	4.3	0.5	1.4
Transport equipment operatives	120	209	50.0	23.4	43.3	56.9	5.8	16.7	0.8	2.9
Laborers	227	322	64.3	41.9	30.8	48.1	4.0	6.2	0.9	3.7
Service workers	4,798	5,630	63.4	41.6	30.4	43.6	5.1	11.9	1.1	3.0
Farmers and farmworkers	208	310	65.4	35.5	26.0	44.2	6.3	11.9	2.4	9.4

Source: U.S. Department of Labor, Bureau of Labor Statistics, Special Labor Force Report No. 240, *Educational Attainment of Workers*, March 1979.

Educational Attainment of White-Collar and Blue-Collar Workers



The past decade has seen a substantial rise in the average educational level of employed workers. In 1979, 24 percent of male workers and 18 percent of female workers had 4 or more years of college, compared to 15 and 11 percent, respectively, in 1970. This shift to a larger proportion of highly educated workers is found across the spectrum of major occupational groups.

Table 5.23

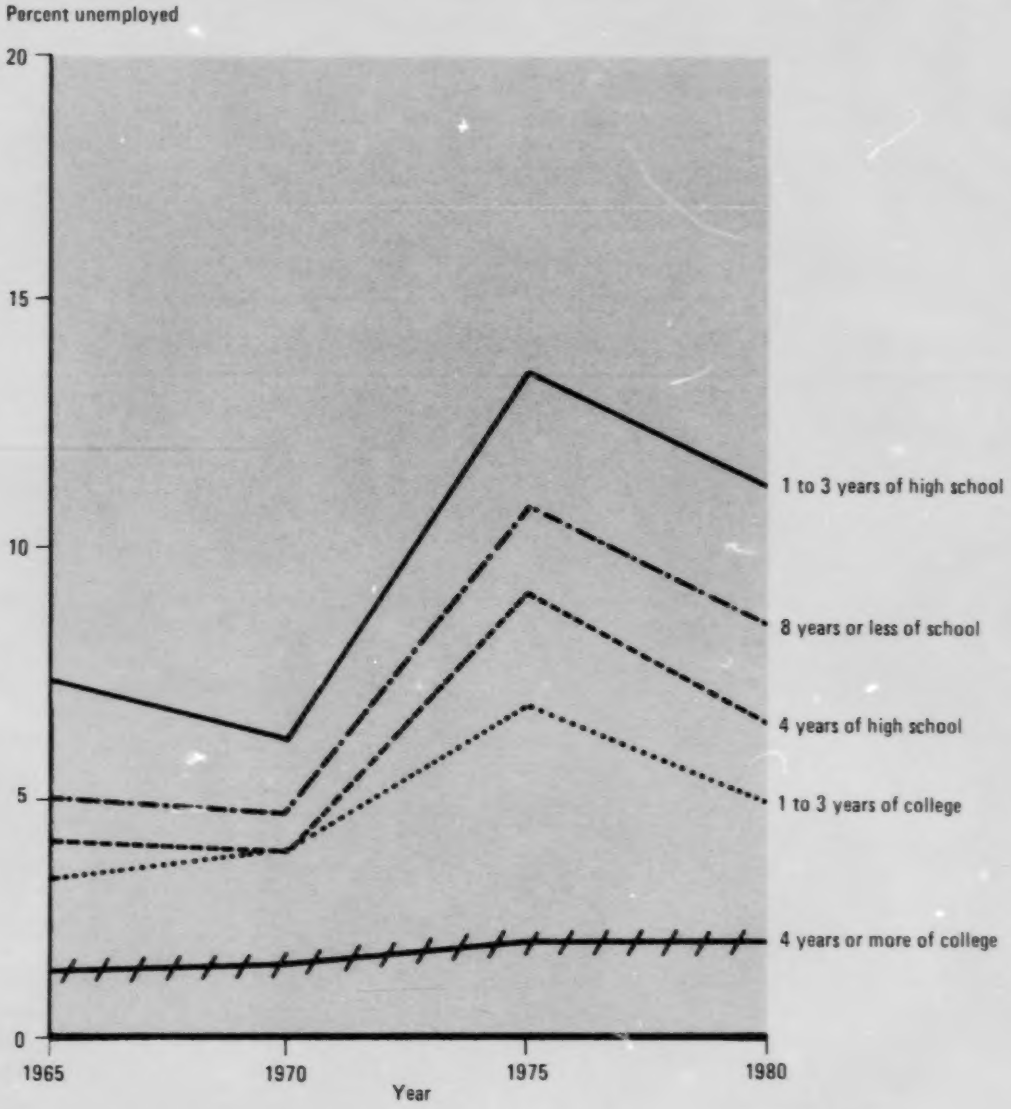
Rates of Unemployment for the Civilian Labor Force 18 Years Old and Over, by Educational Attainment and Sex: Years Ending March 1965, 1970, 1975, and 1980

Educational Attainment	Percent Unemployed			
	1965	1970	1975	1980
Both sexes:				
Total	4.7	4.2	8.7	6.2
8 years or less	5.0	4.7	10.9	8.5
1 to 3 years of high school	7.4	6.2	13.6	11.3
4 years of high school	4.1	3.9	9.1	6.5
1 to 3 years of college	3.3	3.9	6.9	4.9
4 years or more of college	1.4	1.5	2.0	2.0
Males:				
Total	4.4	3.7	8.5	6.4
8 years or less	5.2	4.1	10.9	8.5
1 to 3 years of high school	6.7	5.6	13.2	10.6
4 years of high school	3.4	3.4	9.1	7.2
1 to 3 years of college	3.1	3.8	6.6	5.2
4 years or more of college	1.4	1.2	2.6	1.8
Females:				
Total	5.3	4.9	8.9	6.1
8 years or less	4.7	6.2	10.7	9.3
1 to 3 years of high school	8.6	7.4	14.1	11.2
4 years of high school	5.0	4.6	9.0	6.3
1 to 3 years of college	3.6	4.0	7.3	4.8
4 years or more of college	1.3	2.0	3.6	2.5

Source: U.S. Department of Labor, Bureau of Labor Statistics, March Current Population Surveys, 1965 to 1980, unpublished tabulations.

Chart 5.23

Unemployment Rates by Educational Attainment



Amid changing economic conditions, workers having 4 or more years of college were least likely to be unemployed. Highest unemployment rates were consistently found for those with less than a high school education.

Table 5.24

Earnings of and Hours Worked by 1972 High School Graduates in Initial Job After Completing Formal Schooling, by Level of Schooling Completed, Sex, and Family Socioeconomic Status: 1972 to 1979

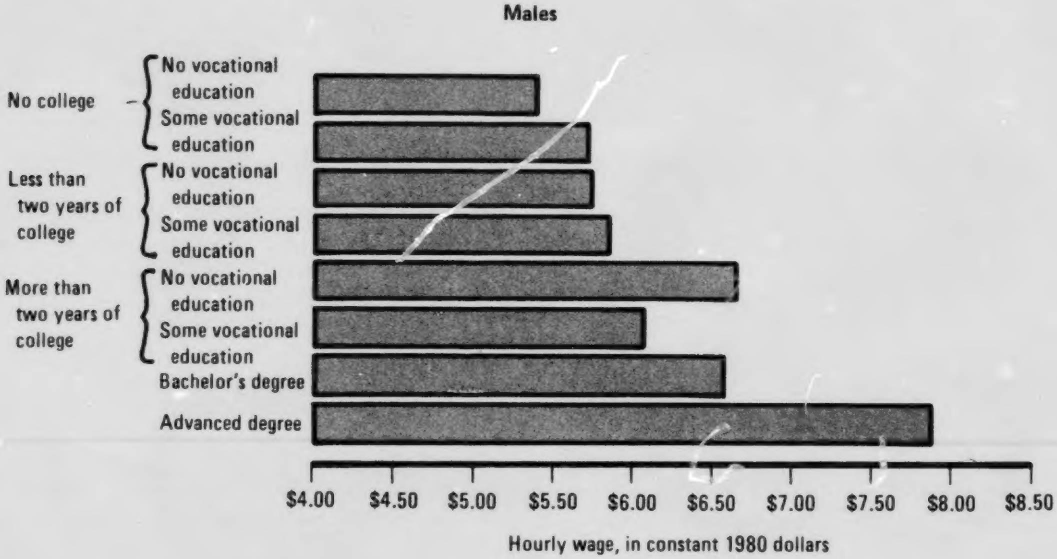
Earnings[1] and Hours Worked	Level of Schooling Completed							
	No College		Less Than 2 Years of College		More Than 2 Years of College			
	No Vocational Education	Some Vocational Education	No Vocational Education	Some Vocational Education	No Vocational Education	Some Vocational Education	Bachelor's Degree	Advanced Degree
Sex:								
Male								
Mean yearly earnings . . .	$11,972	$12,552	$12,391	$12,954	$13,194	$12,693	$14,132	$16,583
Hourly wage	$5.39	$5.72	$5.74	$5.85	$6.64	$6.07	$6.57	$7.88
Hours worked per week .	42.2	41.8	42.1	42.5	40.5	41.2	40.3	39.8
Female								
Mean yearly earnings . . .	$7,794	$8,304	$8,450	$8,460	$9,151	$9,761	$10,934	$12,474
Hourly wage	$4.28	$4.38	$4.55	$4.60	$4.94	$5.12	$5.84	$7.48
Hours worked per week .	36.5	37.2	36.6	36.7	36.5	36.4	35.9	35.2
Family socioeconomic status:								
Low								
Mean yearly earnings . . .	$9,416	$10,053	$10,003	$9,671	$9,650	$10,128	$11,866	$12,294
Hourly wage	$4.75	$5.01	$5.24	$4.89	$4.98	$5.03	$6.03	$7.46
Hours worked per week .	38.9	39.8	39.4	38.3	37.6	37.0	38.5	36.7
Middle								
Mean yearly earnings . . .	$10,096	$11,046	$10,971	$10,673	$11,448	$11,926	$12,308	$13,795
Hourly wage	$4.82	$5.11	$5.18	$5.11	$6.17	$5.64	$6.26	$7.30
Hours worked per week .	39.3	39.4	39.7	39.9	38.5	39.6	38.0	37.7
High								
Mean yearly earnings . . .	$10,354	$11,263	$10,598	$11,558	$12,214	$11,042	$12,979	$15,738
Hourly wage	$4.70	$5.43	$5.07	$5.68	$5.87	$5.95	$6.21	$7.94
Hours worked per week .	38.8	41.1	38.9	39.0	39.7	38.8	38.2	37.7
	Ratio of Female Earnings and Hours Worked to Male Earnings and Hours Worked							
Ratios:								
Mean yearly earnings . . .	.65	.66	.66	.65	.69	.77	.77	.75
Hourly wage	.79	.77	.79	.79	.74	.84	.89	.95
Hours worked per week .	.86	.89	.87	.86	.90	.88	.89	.88

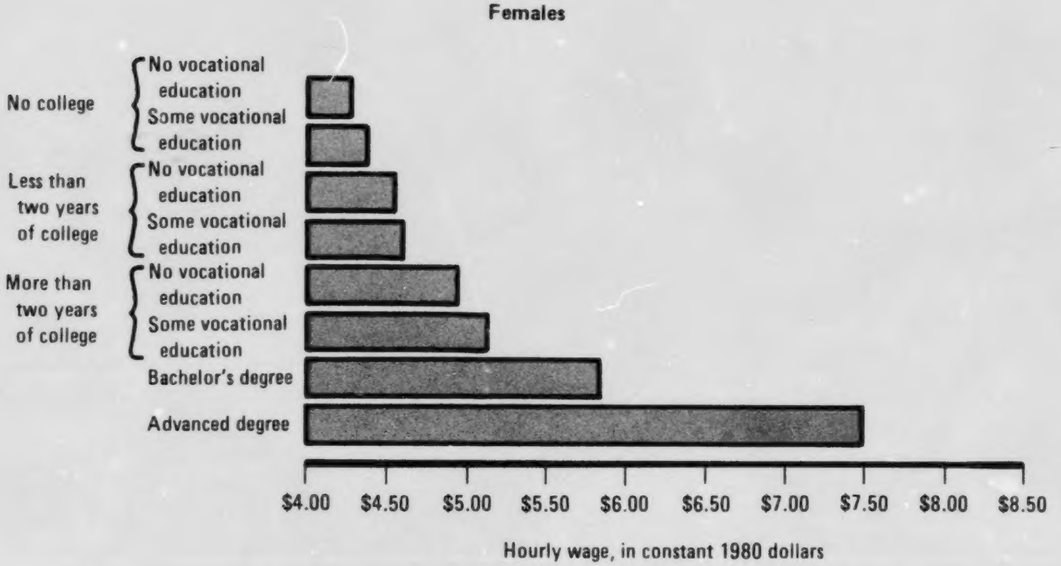
[1] Earnings and hourly wages have been adjusted to 1980 dollars.

Source: U.S. Department of Education, National Center for Education Statistics, National Longitudinal Study of the High School Class of 1972, First through Fourth Follow-ups: 1972 to 1979, unpublished tabulations.

Chart 5.24

Starting Salaries of 1972 High School Senior Class by Postsecondary Educational Attainment





Among 1972 high school graduates, those who went on to earn college degrees generally had higher starting salaries than those with less education. Obtaining postsecondary vocational education also had some salary advantage.

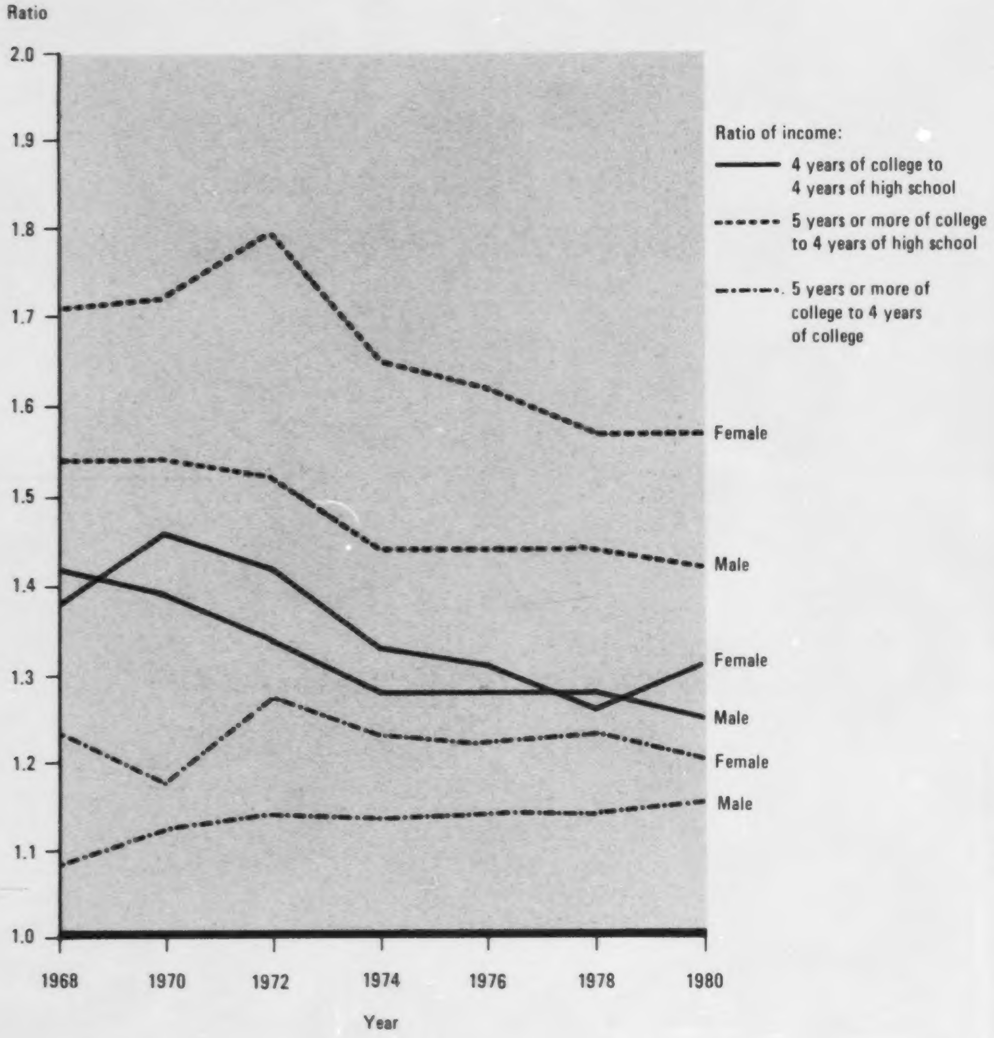
Table 5.25

Median Total Money Income for Year-Round, Full-Time Workers 25 Years Old and Over, by Educational Attainment and Sex: 1968 to 1980

Sex and Year	Educational Attainment				Ratio of Income		
	All Levels	4 Years of High School	4 Years of College	5 Years or More of College	4 Years of College to 4 Years of High School	5 Years or More of College to 4 Years of High School	5 Years or More of College to 4 Years of College
Males:							
1968	$ 8,079	$ 8,302	$11,795	$12,803	1.42	1.54	1.08
1970	9,521	9,567	13,264	14,747	1.39	1.54	1.11
1972	11,148	11,073	14,879	16,877	1.34	1.52	1.13
1974	12,786	12,642	16,240	18,214	1.28	1.44	1.12
1976	14,732	14,295	18,236	20,597	1.28	1.44	1.13
1978	16,882	16,396	20,941	23,578	1.28	1.44	1.13
1980	20,297	19,469	24,311	27,690	1.25	1.42	1.14
Females:							
1968	$ 4,697	$ 4,835	$ 6,694	$ 8,257	1.38	1.71	1.23
1970	5,616	5,580	8,156	9,581	1.46	1.72	1.17
1972	6,331	6,166	8,736	11,036	1.42	1.79	1.26
1974	7,370	7,150	9,523	11,790	1.33	1.65	1.24
1976	8,728	8,377	11,010	13,569	1.31	1.62	1.23
1978	10,121	9,769	12,347	15,310	1.26	1.57	1.24
1980	12,156	11,537	15,143	18,100	1.31	1.57	1.20

Source: U.S. Department of Commerce, Bureau of Census, *Current Population Reports,* "Consumer Income", Series P-60, 1968 to 1980.

Ratios of Median Incomes for Full-Time Workers, by Educational Attainment



Increased levels of education are having less impact on money income than in the past. The gap between salaries of high school graduates and persons with 4 or more years of college has closed substantially over the past 12 years. In 1980, male college graduates earned on the average only 25 percent more than male high school graduates, compared to 42 percent more in 1968.

Table 5.26

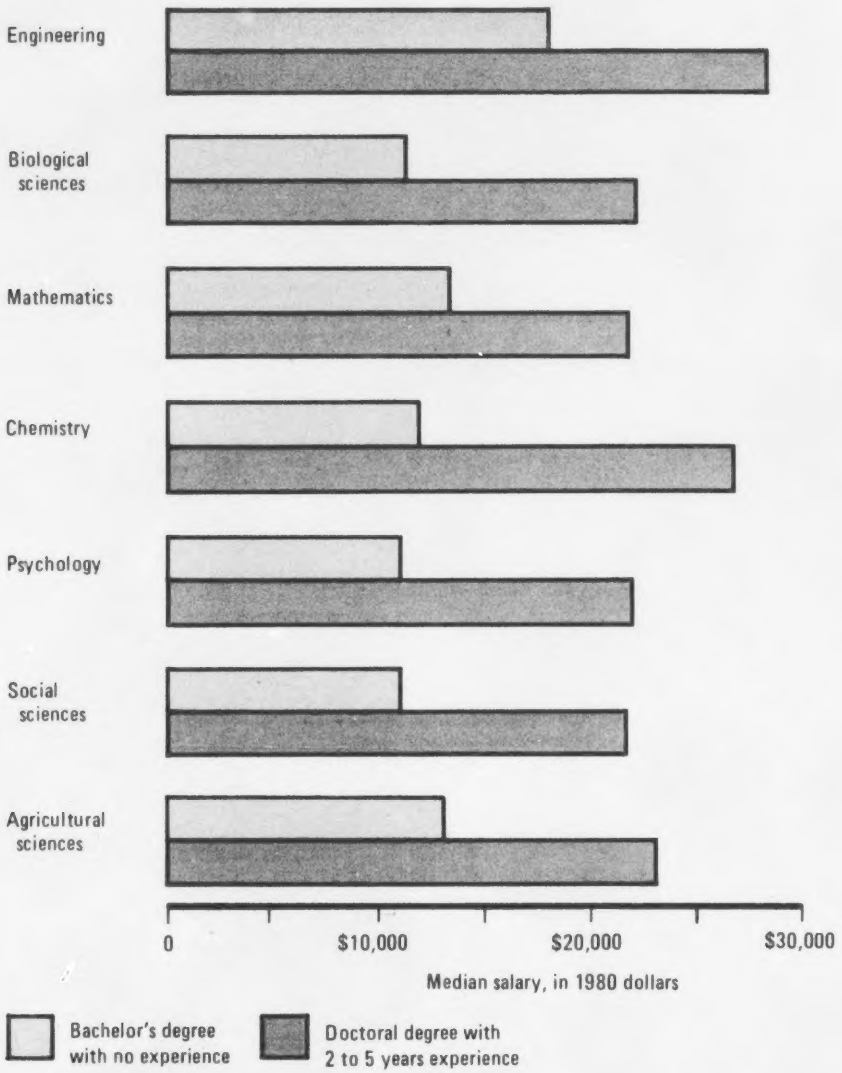
Median Annual Salaries of Bachelor's Degree Recipients with No Experience and Doctoral Degree Recipients with 2 to 5 Years Experience, by Field of Degree: 1980

Field of Degree	Median Salaries[1]	
	Bachelor's Degree No Experience	Doctoral Degree 2 to 5 Years Experience
Engineering	$17,933	$28,295
Biological sciences	11,258	22,132
Mathematics	13,332	21,803
Chemistry	11,857	26,734
Psychology	11,043	22,023
Social sciences	11,090	21,694
Agricultural sciences	13,109	23,118

[1] Median salaries are for full-time workers only and have been adjusted to 1980 dollars using median earnings for professional, technical, and kindred workers.

Source: U.S. Department of Education, National Center for Education Statistics, Survey of Recent College Graduates, 1978, unpublished tabulations, and National Academy of Science, National Research Council, *Science, Engineering and Humanities Doctorates in the United States: 1979 Profile,* 1980.

Median Annual Salaries of Bachelor's and Doctoral Degree Recipients



In all fields but engineering and mathematics, individuals with a doctoral degree and 2 to 5 years experience earned approximately twice as much as bachelor's degree recipients with no experience.

Data Sources
Source and Reliability of Estimates

The information presented in this report was obtained from many sources, including Federal and State agencies, private research organizations, and professional associations. The data were collected using several research methods, including surveys of a universe (such as all colleges) or of a sample, compilations of administrative records, and statistical projections. A general description of the information source and methods of data collection used for each data set is presented in the following subsections. Corresponding tables of standard errors are presented at the end of this appendix. The agency responsible for the information is also listed with a corresponding address and, when possible, a contact person within the agency.

Accuracy of Data

The accuracy of any data reported is determined by the joint effects of sampling and nonsampling errors. Estimates based on a sample will differ somewhat from the figures which would have been obtained if a complete census had been taken using the same survey instruments, instructions, and procedures. The resulting differences are called sampling errors or sampling variability. In addition, all surveys, both universe and sample, are subject to design, reporting, and processing errors and errors due to nonresponse. To the extent possible, these nonsampling errors are kept to a minimum by methods built into the survey procedures. In general, however, the effects of nonsampling errors are less gaugeable than those produced by sampling variability.

The standard error is the primary measure of sampling variability. The changes are about 68 out of 100 that an estimate from the sample would differ from a complete census by less than the standard error. The chances are about 90 out of 100 that the difference would be less than 1.65 times the standard error; about 95 out of 100 that the difference would be less than 1.96 times the standard error; and about 99 out of 100 that it would be less than 2.5 times as large. Thus, knowing the standard error permits us to specify a range within which we can have a stated confidence that a given estimate would lie if a complete census, rather than a sample survey, had been conducted.

To illustrate this further, consider the table, page 239, of standard errors and 90 percent confidence intervals for estimates from the High School and Beyond (HSB) sample. For an estimate of 30 percent of males participating in a program, the table shows that the standard error is 0.6 percent. This means the chances are about 68 out of 100 that the 30 percent estimate is within 0.6 percent of the percent that could result from a complete census. Therefore, the 68 percent confidence interval is 29.4 to 30.6. In order to increase our confidence to 90 percent, we would have to use 1.65 times the standard error or 0.99 percent. The 90 percent confidence interval (rounded to tenths of a percent) would then be 29.0 to 31.0, which is the interval shown in the table.

A similar statement can be made concerning an estimated difference. The standard error of a difference between two sample estimates is approximately equal to the square root of the sum of the squared standard errors of the estimates. The standard error of a difference, a-b, is in fact:

$$\sigma_{a\text{-}b} = \sqrt{\sigma_a^2 + \sigma_b^2 - 2\sigma_{ab}}$$

This figure will represent the actual standard error quite accurately for the difference between two estimates of the same characteristic in two different areas, or for the difference between separate and uncorrelated characteristics in the same area. If, however, there is a high positive correlation between the two characteristics, the formula will overestimate the true standard error.

It should be noted that the standard errors presented in subsequent sections and in the original documents are approximations. That is, to derive estimates of standard errors that would be applicable to a wide variety of items and could be prepared at a moderate cost, a number of approximations were required. As a result, the standard errors presented provide a general order of magnitude rather than the exact standard error for any specific item.

The preceding discussion on sampling variability was directed toward a situation concerning one or two estimates. A more difficult situation is encountered when determining the accuracy of statistical projection. A detailed discussion will not be presented here. In general, the further away from the mean of the set of data being used for the projections, the greater the variability in the projection. That is, if annual data from 1970 to 1980 are being used to project enrollment in institutions of higher education, the further away from 1980 one gets, the more variability in the projection. One is less sure of the 1990 projection of enrollment in institutions of higher education than the 1981 projection.

Sources of Information

A large number and variety of sources were used as the basis of information for this report. Take particular care in comparing data from the different sources. Differences in procedures, timing, phrasing of questions, interviewer training, and so forth, mean that the results from the several sources are not strictly comparable. The information in this report comes from the following different source documents. It should be noted that more extensive documentation of survey procedures does not imply more problems with the data, only that more information is available on certain surveys than on others.

1. Annual Survey of the Public's Attitudes Toward the Public Schools

This is the thirteenth "Annual Survey of the Public's Attitudes Toward the Public Schools" conducted and published by the Gallup Poll. The survey uses a modified probability sample to produce an approximation of the noninstitutional civilian population, 18 years and older, living in the United States. Personal, in-home interviews were conducted with 1,519 adults in all areas of the Nation and in all types of communities. Allowance for persons not at home was made by a "times-at-home" weighting procedure rather than by "callbacks." This procedure is a standard method for reducing the sample bias that would otherwise result from under-representation in the sample of persons who are difficult to find at home.

The estimates obtained from the annual survey of attitudes toward public schools are subject to both sampling and nonsampling error. Nonsampling error could result from any of the general sources previously listed. In addition, nonsampling error often occurs in attitude surveys due to the specific times that the survey was taken. Attitudes can be significantly affected by events that impinge on the respondents immediately prior to the survey. Considering sampling error, Tables 1A and 1B show how much allowance should be made for the sampling error of a percentage and a difference, respectively.

If questions exist concerning the Annual Survey of the Public's Attitudes Toward the Public Schools, the author is:

George Gallup
Public Opinion Surveys, Inc.
53 Bank Street
Princeton, New Jersey 08540

2. Common Core of Data

The Common Core of Data (CCD) program is a coordinated effort administered by the National Center for Education Statistics (NCES) to acquire and maintain statistical data on States and local public school districts. The CCD program, which began in 1954, is a universe survey of State education agencies and education agencies of the District of Columbia and outlying areas. Information is collected annually on the numbers of local public school districts, public elementary and secondary school systems, staff, students, high school graduates, estimates of revenue and nonrevenue receipts, school expenditures, and average salaries paid to classroom teachers and other professional/educational staff.

Since the CCD is a universe survey, the information presented in this report from the CCD is not subject to sampling error. However, nonsampling error may occur from two possible sources — nonreturn and misclassification. Nonreturn is minimal, with all States submitting almost all nine survey instruments each year.

With data submitted by over 90,000 schools to approximately 16,000 local districts and compiled by the 50 State education agencies, opportunity does exist, however, for misclassification. NCES attempts to minimize these errors by working closely with the Council of Chief State School Officers and its Committee of Education and Information Systems. The State Education Agencies have the task of gathering the information and performing the initial data audit. For the added burden, the States are reimbursed by NCES. Then to the extent possible, NCES reviews each State's reports for internal consistency and for comparability with information received in previous surveys, State publications, and related NCES studies. Letters, telegrams, and telephone calls are used, when necessary, to obtain data from respondents and to resolve questions.

As in any mailed questionnaire survey, interpretation of instructions and definitions may vary among respondents. Because public elementary/secondary education is a State and local responsibility, any statistical total for the Nation as a whole reflects a composite of the different reporting practices in the States. The use of standard forms and definitions in collecting data tends to minimize these variations. Whenever State deviations from prescribed definitions and instructions were known, they are indicated in the footnotes. NCES encourages each State to obtain the data for its reports by conducting a fall survey of local school districts with adaptations of the Federal forms and accompanying instructions. Some States reported from survey data collected for regular annual reports.

If questions arise concerning the Common Core of Data, they can be directed to:

A. Stafford Metz
Chief, Institutional Survey Branch
National Center for Education Statistics
400 Maryland Ave., S.W. (Presidential Bldg.)
Washington, D.C. 20202

3. Current Population Survey

The Current Population Survey (CPS) is a monthly household survey conducted by the Bureau of the Census, with its primary purpose to obtain statistics on employment. CPS also serves as the vehicle for a number of other surveys. Information from three such surveys is presented in this report: Educational Attainment, Participation in Adult Education, and School Enrollment — Social and Economic Characteristics of Students. For expediency, the CPS sampling procedures common to all three will be described in general, with the specific information for each of the three surveys presented independently.

The sampling areas for the CPS are chosen to provide coverage in each State and the District of Columbia. The monthly survey deals mainly with labor force data for the civilian noninstitutional population. Response for the CPS has been between 95 and 96 percent. Another possible source of nonsampling error in the CPS results is undercoverage from missed housing units and missed persons within sampled households. Overall estimated undercoverage is about 5 percent. It is known that CPS estimated undercoverage varies with age, sex and race. Ratio estimation to independent age-sex-race population controls partially corrects for the biases due to survey undercoverage.

3A. Educational Attainment

Data on years of school completed are derived from two questions which are on the CPS instrument. Formal reports documenting educational attainment are produced by the Bureau of the Census using March CPS results.

Because the items soliciting educational attainment are part of the CPS, nonsampling variability in the data results from those constraints and problems listed concerning the CPS. In addition, some data indicate that, on the average, the respondents have a tendency to overestimate the educational level of members of their household. This, it is felt, is due to a lack of the respondent's knowledge of the exact educational attainment of each household member and the hesitancy to acknowledge less than a high school education. Another cause of nonsampling variability is the change in the Armed Forces population over years. The CPS excludes members of the Armed Forces who are living outside the United States or who are unmarried and living on post. In 1970, 25 percent of all males 20 and 21 years old were in the Armed Forces. By 1974, this had decreased to less than 10 percent. The exclusion from the CPS of a substantial proportion of the members of the Armed Forces appears to increase the proportion of the CPS population with some college and decrease the proportion who finished high school but went no further. This was true in 1970, when data was available for such comparison. This situation may have changed with the end of the draft and the initiation of the Volunteer Army.

Examples of the sampling variability in the estimates of educational attainment are given in Table 2. The figures shown in the table hold for total or white population estimates only. The variability in estimates for subgroups (e.g., region, household relationships, etc.) can be estimated using the tables presented in the original source documents.

If questions arise concerning Educational Attainment in the United States, they can be directed to:

Chief, Education and Social
Stratification Branch
Bureau of the Census
Washington, D.C. 20233

3B. Participation in Adult Education Survey

In May 1969, 1972, 1975, 1978, and 1981, interviewers augmented the Current Population Survey (CPS) with the Participation in Adult Education (PAE) survey. In addition to the questions on the CPS, interviewers asked if anyone in the household 17 years of age or older had participated in adult education in the 12 month period prior to the survey date. A survey form was either filled out by the interviewer or left with a household proxy for participants who were not at home at the time of the interview. In 1981, the supplement form was no longer left with the proxy but completed by the interviewer.

The PAE response rate in 1981 was 94 percent. This rate must be viewed in conjunction with the 96 percent response rate of the CPS. The overall response rate for the PAE survey in 1981 is then 90 percent.

Substantial changes were made in the 1975 and 1978 surveys to include participants in adult education who were also full-time students in programs leading toward a high school diploma or college degree. Also, courses taken by adults as full-time students in vocational or occupational programs of six months or more duration were excluded. Because of the changes in definitions from 1969 to 1981, only the most basic statistics are presented over time.

As previously noted, a second source of variability in estimates obtained from a sample survey is in the sampling. That is, there would be no sampling variability in a complete census. Examples of the sampling variability in the estimates from the PAE survey are given in Tables 3 and 4.

The figures shown in the tables hold for total or white population estimates only. The variability in estimates for subgroups, employment status, income, education, etc., can be estimated using the tables presented in the original source documents.

The contact person at NCES for further information concerning the PAE survey is:

Evelyn Kay
Adult and Vocational Surveys and Studies Branch
National Center for Education Statistics
400 Maryland Ave., S.W. (Presidential Bldg.)
Washington, D.C. 20202

3C. School Enrollment

Each October the Current Population Survey interview is augmented with additional questions concerning school enrollment. The school enrollment supplement is administered by the CPS interviewer.

The main sources of nonsampling variability in the responses to the supplement are those inherent in the CPS. The question of current enrollment is not as sensitive as the question concerning educational attainment — for example, acknowledging the lack of a high school diploma. The assessment of current grade, however, may be in error because the respondent may not actually know it. This could be especially true for households with children in college. It could also be true of households with children in nursery school. In the case of children in college, it is difficult with different credits or hours taken by students to determine specifically what grade or year has been completed. With nursery school children, a problem could occur with the definition. A nursery school is defined as a group or class that is organized to provide educational experiences for children. Educational experiences could be interpreted differently by different respondents.

Examples of the sampling variability in the estimates of school enrollment are given in Table 5. The figures shown in the table hold for total or white population estimates only. The variability in estimates for subgroups (e.g., region, race, etc.) can be estimated using the tables presented in the original source document.

If questions arise concerning School Enrollment in the United States, they can be directed to:

Chief, Education and Social
Stratification Branch
Bureau of the Census
Washington, D.C. 20233

4. High School and Beyond

High School and Beyond (HSB) is a national longitudinal study of 1980 high school seniors and sophomores conducted by the National Center for Education Statistics. A probability sample of 1,015 high schools was selected with a target number of 36 seniors and 36 sophomores in each of the schools. The total number of students participating in the survey is 58,728. Substitutions were made for noncooperating schools in those strata where it was possible, but not for students. Student and parent refusals and student absences resulted in an 84 percent completion rate for students. This refers to the overall return rate of the survey and not the completion rate of each item within the survey.

Several small groups in the population were sampled with probabilities higher than their occurrence in the population. This was done to allow for special study of certain types of schools or students. Students completed questionnaires and took a battery of cognitive tests. In addition, a sample of parents of sophomores and seniors (about 3,600 for each cohort) was surveyed.

The major sources of nonsampling error are in school nonresponse, student survey nonresponse, and student misinterpretation of the items. Nonresponse can come from the 9 percent school nonresponse, a 16 percent student nonresponse and the nonresponse rates for given items. The nonresponse rates by item for those students returning a survey range from a low of 0.3 percent (questioning if the student expects to graduate) to a high of 21 percent (concerning family income). Examples of the sampling variability in the estimates from the HSB survey are given in Table 6.

If questions arise concerning the High School and Beyond study, they can directed to:

Samuel Peng
Longitudinal Studies Branch
National Center for Education Statistics
400 Maryland Ave., S.W. (Presidential Bldg.)
Washington, D.C. 20202

5. Higher Education General Information Survey

The Higher Education General Information Survey (HEGIS) is a coordinated effort administered by the National Center for Education Statistics (NCES). Its purpose is to acquire and maintain statistical data on the characteristics and operations of institutions of higher education. HEGIS, developed in 1966, is an annual universe survey of institutions listed in the latest *Education Directory, Colleges and Universities.*

The information presented in this report draws on the three HEGIS surveys which solicit information concerning finances, enrollment, and degrees. These surveys are part of the overall HEGIS package and as such part of the universe sample. The data presented therefore, are not subject to sampling error but are subject to nonsampling error. Due to the differing information solicited by the three survey instruments the sources of nonsampling errors differ. Each survey will therefore be discussed separately. A validation study, "HEGIS Post-Survey Validation Study", was conducted for two of the three HEGIS Surveys, enrollment and degrees, in 1979. The information concerning the nonsampling error of these two surveys presented in this appendix draws considerably on this study.

If questions exist concerning the three surveys discussed and used as data sources for this report, or if other questions arise concerning HEGIS, they can be directed to:

Curtis O. Baker
University and College Surveys and
Studies Branch
National Center for Education Statistics
400 Maryland Ave., S.W. (Presidential Bldg.)
Washington, D.C. 20202

5A. Degrees and Other Formal Awards Conferred

The Formal Awards Conferred survey has been part of the HEGIS series since its development. For the 1970-71 survey, however, the taxonomy was changed. The information from survey years 1970-71 through the present is therefore directly comparable, but care must be taken if information before this date is included in any comparison. Return rate does not appear to be a source, or at least not a significant contributor to nonsampling error for this survey. The return rate over the years has been extremely high, with the rate for years 1977-78 and 1978-79 at 100 percent. Because of the high return rate, nonsampling error caused by imputation would also be minimal.

The major sources of nonsampling error for this survey are: differences in the HEGIS program taxonomies and taxonomies used by the school; classification of double majors and double degrees; operational problems; and timing of the survey. The operational problems can be classified under:

- The data source (e.g., commencement list) not updated to add or drop students;
- A change of personnel unfamiliar with completing the HEGIS forms;
- Graduates of affiliate schools included in report when, in fact, those schools have their own HEGIS reports.

In the validation study conducted in 1979, it was found that the sources of nonsampling error noted above contributed to an error rate of 0.3 percent overreporting for bachelor's degrees and 1.3 percent overreporting for master's degrees. The differences, however, varied greatly among fields. Over 50 percent of the fields selected for the study had no errors identified. The major categories of fields that had large differences were: business and management, education, engineering, letters, and psychology. It is also shown that differences in proportion to the published figures were less than one percent for most of the selected fields that had some errors. Exceptions to this were: master's and Ph.D. programs in labor and industrial relations (20 percent and 8 percent); bachelor's and master's programs in art education (3 percent and 4 percent); bachelor's and Ph.D. programs in business, commerce, and distributive education (5 percent and 9 percent); master's and Ph.D. programs in letters (1 percent and 4 percent); master's programs in philosophy (8 percent); and Ph.D. programs in psychology (11 percent).

5B. Fall Enrollment in Institutions of Higher Education

Fall Enrollment in Institutions of Higher Education has been part of the HEGIS series since its development. The enrollment survey, as with the HEGIS degree survey, does not appear to suffer significantly from nonreturn rates. In the 1979 survey, complete data was obtained on all but 17 of the 3,190 institutions. For 15 of these institutions, 1978 data was substituted. The two other institutions included one comprised solely of correspondence students and one that does not offer classes.

The major sources of nonsampling error for this survey come from classification problems, the availability of needed data, the interpretation of definitions, survey due date, and operational errors. Of these, the classification of students appears to be the main source of error. Institutions have problems in correctly classifying first-time freshmen, other first-time students and unclassified students for both full-time and part-time categories. These problems are more evident at 2-year institutions (both private and public) and the private 4-year institutions. In 1977-78, the classification problems lead to an estimated overcount of 11,000 full-time students and an undercount of 19,000 part-time students. Although the percentage of error for the grand total was quite small (i.e., less than 1 percent), the percentage of errors for detailed student levels might be as high as 5 percent or even higher at certain student levels.

5C. Financial Statistics of Institutions of Higher Education

The Financial Statistics of Institutions of Higher Education survey has been part of the HEGIS series since its development. A number of changes were made in the financial survey instruments in 1975. While these changes were significant, only comparable information over the years is presented in this report. Other possible sources of nonsampling error in the financial statistics are nonresponse, imputation, and misclassification. The response rate has been over 90 percent for the years reported. Two general methods of imputation have been used: (1) if prior year's data were available for a nonresponding institution, these data were inflated using the Higher Education Price Index and adjusted according to changes in enrollments; or (2) if no previous year's data were available, current data were used from peer institutions selected for location (State or region), control, level, and enrollment size of institution. For the most recent year reported, the imputation method did not include the adjustment for changes in enrollments. It should be noted that the imputed current funds expenditures of the nonrespondents are less than 3 percent of the aggregate U.S. total.

To reduce reporting error, NCES uses national standards for reporting finance statistics. These standards are contained in *College and University Business Administration: Administrative Services (1974 Edition)*, published by the National Association of College and University Business Officers; *Audits of Colleges and Universities* (as amended August 31, 1974), by the American Institute of Certified Public Accountants; and *HEGIS Financial Reporting Guide (1980)*, by NCES. Wherever possible, definitions and formats in the survey form are made consistent with those in these three accounting texts.

6. National Assessment of Educational Progress

The National Assessment of Educational Progress (NAEP) is a project funded by the National Institute of Education and carried out by the Education Commission of the States. The overall goal of the project is to determine the Nation's progress in education. To accomplish this goal, a cross-sectional study was designed and initially implemented in 1969. Each year since 1969, National Assessment has gathered information about levels of education achievement across the country. NAEP surveys the education attainments of 9-, 13-, and 17-year-olds and young adults (ages 25-35) in 10 learning areas. Different learning areas are assessed every year, and all areas are periodically reassessed in order to measure possible changes in education achievement.

A multi-stage probability sample is utilized by NAEP. The primary sampling units are stratified by region, and within region by State, size of community and for the two smaller sizes of community strata, by socioeconomic level.

Students participating in the project are administered instruments designed to assess the student attainment of specific tasks. Assessment exercises are administered either to individuals or small groups by specially trained personnel. Information from NAEP is subject to both nonsampling and sampling error. Two possible sources of nonsampling error are nonparticipation and instrumentation. Nonparticipation is held to a minimum through oversampling, although this does not assess the bias of nonparticipants. Instrumentation nonsampling error concerns whether the NAEP assessment instruments measure what is being taught and in turn what is being learned by the students.

The sampling variability in a cross-sectional study or comparison tends to be larger than that of a longitudinal study. In this case, for example, the standard error for the mean change in performance from 1973 to 1978 for the old sample of 9-year-olds is 0.66.

If questions exist concerning NAEP, contact:

National Assessment of Educational Progress
Education Commission of the States
1860 Lincoln Street
Suite 700
Denver, Colorado 80295

7. National Longitudinal Study of the High School Class of 1972

The National Longitudinal Study (NLS) of the High School Class of 1972 periodically queries a national sample of the 1972 high school seniors to chart their educational, vocational, and personal development. NLS was initiated in the spring of 1972 by the National Center for Education Statistics. Over 1,000 public and private schools and nearly 18,000 students participated. Four followup surveys have been conducted since the 1972 base-year survey, fall 1973, fall 1974, fall 1976, and fall 1979.

The original sample design was a deeply stratified two-stage probability sample, with schools as first-stage sampling units and students as second-stage units. The first-stage sampling frame was constructed from computerized school files maintained by the Office of Education and by the National Catholic Education Association. The schools were then stratified according to various criteria and randomly selected within strata. Except for schools in low-income areas or with high black enrollments and schools with small enrollments, the schools were sampled with equal probability and without replacement. From each selected school, 18 students were randomly chosen to participate. The samples represent the Nation's 12th grade enrollment in 1972 in all public and private schools.

The main source of nonsampling error in a longitudinal study, i.e., a study of the same individuals over time, is usually the decrease in return rates over time. With NLS, of the 1,200 primary sample schools, 948 participated in the base-year survey. Of the remainder, 21 had no seniors enrolled, and 231 either refused to participate or could not, because they had received the request too late in the school year. In the summer of 1973, NCES made further attempts to secure the participation of the 231 schools that had not participated in the base-year survey, and to replace the 21 schools that had no seniors.

The "resurvey" activity, initiated prior to the first followup survey, involved securing school cooperation, choosing random samples of up to 18 former 1972 seniors per school, and then securing the last known addresses of those selected. This activity was successful in 205 of the 231 primary sample schools; thus, students from 1,153 of the 1,200 primary sample schools were included in the first followup survey. Also, an additional sample of 200 school districts was contacted during the base year to identify public schools not included in the original school sampling frame. Forty-five such schools were identified, and 23 of these were randomly selected as an "augmentation" sample to compensate for base-year undercoverage. Samples of former 1972 seniors students from 16 of these augmentation schools participated in the first and subsequent followup surveys.

Due to the complexities of the base-year data collection, both unequivocal base-year data availability rates and subsequent followup response rates are difficult to compute. However, using the augmented base-year sample, the return rates were quite high.

Among the 16,683 individuals responding to the base-year questionnaire, the percentages also responding in the first, second, third, and fourth followup were approximately 94, 93, 89, and 83 percent, respectively. Of the 21,350 first followup questionnaire respondents, 95, 91, and 84 percent also responded to the second, third, and fourth followup, respectively. Sample retention among the

20,872 second followup respondents was 94 percent for the third followup and 87 percent for the fourth. Approximately 91 percent of the 20,092 third followup respondents also responded in the fourth followup.

Another area of possible nonsampling error in the NLS estimates is that of sample weights and nonresponse adjustments. Since students were selected with unequal probability, simple weighted tabulations could be misleading; thus, sample weights were computed for each student. The unadjusted sample weights were calculated as the inverse of sample inclusion probabilities, which are a function of the school selection probabilities and the student selection probabilities within school. Such calculations were nontrivial due to the several *post hoc* redefinitions of the sample; however, appropriate weighting was accomplished.

To provide better estimates of the attributes of this population, it was necessary to address the problem of compensating for instrument nonresponse. This was accomplished through weight adjustments. Because of the various sample redefinitions and augmentations, several sets of adjusted weights were computed. The general procedure used was a weighting-class approach, which distributes the weights of nonrespondents to respondents who are most like them. Weighting classes were defined by several survey classification variables: race, sex, high school curriculum, high school grades, and parents' education. Differential response rates for students in different weighting classes are reflected in this adjustment.

In addition to the nonresponse adjustment, the problem of nonresponse was addressed by identifying 88 critical questions. Special effort was then made to contact participants who failed to respond to these items in their returned questionnaires.

Estimates of the sampling errors for the NLS were calculated as a joint function of the estimated percentage and the sample size for the percentage base (i.e., denominator). The actual standard error estimate, for a percentage from the complex stratified multistage NLS sample, is inflated over the standard error estimate that would have obtained had a simple random sample of students been selected.

The estimated standard errors ranged from 1.19 to 6.00 for n equal 100 and estimated percentages of 1 (or 99) to 50; and standard errors ranged from 0.08 to 0.42 for n equal to 20,000 and the same estimated percentages.

Questions concerning the NLS can be directed to:

Andrew Kolstad
Project Officer
National Longitudinal Study
National Center for Education Statistics
400 Maryland Ave., S.W. (Presidential Bldg.)
Washington, D.C. 20202

8. National Teacher Opinion Poll — 1980

The National Teacher Opinion Poll — 1980 was a survey conducted by the research division of the National Education Association. The survey was designed to solicit information concerning topical areas such as censorship, discrimination, retirement, and job security. Selections of participants for the survey was accomplished using a two-stage sample design with the first stage stratum being determined by the number of pupils enrolled in the districts. Selection probabilities were determined so that the resulting sample is self-weighting.

Possible sources of nonsampling error are nonresponse and item misinterpretation. The 1980 National Teacher Opinion Poll conducted by NEA Research was sent to 2,165 of the Nation's approximately 2,185,000 public school teachers. Exactly 1,738 questionnaires were returned, which yields a 80.3 percent response rate. Because of the population being surveyed, it is felt that item misinterpretation is minimal.

Considering the sampling variability, the estimate is less than 3 percent. The estimated standard error for estimating population differences in percentages is less than 5 percent.

If questions exist concerning the National Teacher Opinion Poll 1980, they can be directed to:

Bernard R. Bartholomew
NEA Research
National Education Association
1201 16th Street, N.W.
Washington, D.C. 20036

9. Recent College Graduates Survey

The Recent College Graduates Survey (RCGS) is a sample survey administered by the National Center for

Education Statistics. The RCGS was administered in 1976, 1978 and 1981. Data from 1981 were not available in time for publication in this report.

For both the 1976 and 1978 Recent College Graduates Surveys, a two-stage sample was used to obtain the data. For the first stage, a sample of colleges and universities offering a bachelor's or master's degree was selected: 211 schools for the 1976 survey and 297 schools for the 1978 survey. For both surveys, the universe of schools was stratified by: percent of graduates in the school with degrees in education; control of institution (public or private); whether or not the school was on a list of schools emphasizing special education; and geographic region of the institution. For the 1978 survey, a sample of 30 predominantly black institutions was included in the total of 297 institutions.

For the second-stage sample, a listing of graduates with bachelor's and master's degrees was obtained from the selected schools. The graduates were stratified by level of degree (bachelor's and master's) and by special education graduates, other education graduates, and other graduates. The sample of graduates was selected through the use of systematic sampling; that is, by selecting every nth case with a random start.

In surveys such as this, it is felt that the major source of possible sampling error is in nonresponse. For the 1976 survey, 200 of the 211 schools in the sample responded (95 percent) and 4,350 graduates of the 5,528 in the sample responded (79 percent). For the 1978 survey, 283 of the 297 schools responded (95 percent) and 9,592 graduates of the 11,025 in the sample responded (87 percent). A special followup of nonrespondents was conducted for the 1978 survey to obtain the 87 percent response rate.

A ratio estimation procedure was used in both surveys to inflate the sample results to estimates applicable to the total number of graduates in 1974-75 and in 1976-77. The Higher Education General Information Survey (conducted by the National Center for Education Statistics) provided the applicable estimate for total number of graduates in the various strata for the non-predominantly black schools. The Office of Civil Rights provided the applicable estimates for the predominantly black institutions.

In addition to nonresponse of schools and individuals which are possible sources of nonsampling error there is item nonresponse. In many instances the item nonresponse was relatively small. For example, major field of study had an item nonresponse rate of about 0.3 percent. This would cause only a slight underestimate of the number of graduates by major field of study.

Measures of the sampling variability in the RCGS are the coefficients of variation presented in Table 7.

For example, the estimate of the number of bachelor's recipients employed as accountants is about 45,000. The coefficient of variation for an estimate of 45,000 is about .071 (from the table, by linear interpolation). The standard error is then roughly 3,195 (45,000 × .071). A 95 percent confidence interval is 45,000 ± 2 × 3195 (38,610 – 51,390).

If there are questions concerning the Recent College Graduates Survey, they can be directed to:

A. Stafford Metz
Chief, Institutional Survey Branch
National Center for Education Statistics
400 Maryland Ave., S.W. (Presidential Bldg.)
Washington, D.C. 20202

10. Status of the American Public School Teacher — 1980-81

Status of the American Public School Teacher, is a survey conducted every 5 years by the National Education Association (NEA). The survey was designed by the NEA Research Division and initially administered in 1956. The intent of the survey is to solicit information covering various aspects of the teachers' professional, family, and civic life.

Selection of participants for the survey is accomplished using a two-stage sample design, with the first stage stratum being determined by number of pupils enrolled in the districts. Selection probabilities are determined so that resulting sample is self-weighting.

Possible sources of nonsampling error are nonresponses, misinterpretation, and, when comparing data over years, changes in the sampling method and instrument. A sample of 1,768 was selected from the approximately 2,185,000 public school teachers and 1,326 usable replies

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were obtained. This yielded a response rate of 75 percent. Misinterpretation of the survey items should be minimal, as the sample responding is not from the general population but one knowledgeable about the area of concern. With sampling changed after 1956 and some wording of items changed over the different administrations, care is taken to present only comparable data.

Since sampling is used, sampling variability is inherent in the data. An approximation to the maximum standard error for estimating population percentages is 1.4 percent. To estimate the population percentage with 90 percent confidence, the maximum standard error of 1.4 percent is multiplied by 1.645 ($0.014 \times 1.645 = 0.023$) to produce the largest error associated with any single sample proportion (2.3 percent). For example, if a sample percentage is 60 percent, there is a 90 percent chance that the population percentage lies between 57.7 percent and 62.3 percent (60 percent ± 2.3 percent).

Similar confidence intervals for population means can be obtained from the sample means reported in this study by using the standard errors displayed with the means. For example, suppose that the mean salary of a group (or subgroup) is reported as $16,232 with a standard error of $98.80. Multiplying this standard error by 1.645 (for the 90 percent confidence level) provides a precision (or error) of $163. Finally, $163 is subtracted from and added to the sample mean to obtain a range of $16,069 to $16,395. These are the 90 percent confidence limits, meaning that there is a 90 percent chance that the true average salary value in the population of interest falls within this range.

If comparisons of two percentages are to be made, Table 8 gives maximum differences for significance with a 90 percent confidence.

If questions exist concerning the Status of the American Public School Teacher, they can be directed to:

Suzanne Gardner
National Education Association
Research Division
1201 16th Street, N.W.
Washington, D.C. 20036

11. Survey of Teacher Demand and Shortages

The Survey of Teacher Demand and Shortages was a sample survey conducted by the National Center for Education Statistics during the 1979-80 school year. Survey respondents were public school district administrators and administrators of other units, such as private schools and schools operated by State or intermediate agencies to provide vocational or special education. The figures are based on head counts (not full-time equivalents) of full-time and part-time teachers in the responding units. For the purposes of the survey, persons teaching in more than one field or level were reported in the field or level in which they spent most of their teaching time. The exception was that any teacher engaged in bilingual or special education was counted in either of those areas regardless of the time spent in other areas.

Possible sources of nonsampling error are nonresponse, use of head counts versus full-time equivalents, and classification of teaching field. Out of approximately 16,000 public school districts (LEAs) and 22,000 other educational units engaged in elementary and secondary education, survey forms were mailed to 1,448 LEAs and 875 other units. NCES received responses from 1,273 LEAs and 793 other units — a response rate of 88 percent for LEAs and 91 percent for other units. No assessment of other possible nonsampling errors have been made.

The table of standard errors, Table 8, gives examples of the sampling variability in the data.

Questions concerning the Survey of Teacher Demand and Shortages can be directed to:

John Sietsema
Division of Elementary and Secondary Statistics
National Center for Education Statistics
400 Maryland Avenue., S.W. (Presidential Bldg.)
Washington, D.C. 20202

12. Sustaining Effects Study

The Sustaining Effects Study (SES) is a multi-faceted study of issues in the compensatory education of elementary school children. The study was conducted under the direction of the Office of Evaluation and Dissemination, U.S. Office of Education. Information presented in this report is taken from the first year of the Longitudinal Study, a substudy within SES.

The Longitudinal Study was designed to assess the educational achievement of children in the fall and spring for three consecutive years. The students participating in the study were administered achievement tests in reading and mathematics. The 1974 expanded edition, Form S of the Comprehensive Test of Basic Skills, was used to measure each student's academic performance. The scores presented in this report are vertical scale scores adjusted for racial bias.

The schools in the study were drawn from three different groups. The Representative Sample of schools is a sample carefully drawn to represent all of the nation's public schools having some of the grades 1 through 6. A second group of schools, the Comparison Sample, is composed of schools that have large proportions of students from high-poverty-level homes but do not receive special funds to offer compensatory-education services. The third group is the Nominated Sample, composed of schools that were nominated because their instructional programs were thought to have promise as being unusually effective for low-achievement students. The information presented in this report is from the representative sample. The first-year representative sample was selected from the Nation's 62,534 public schools that operate at least one grade in the 1-6 range. The sampling scheme used three stratifying dimensions: geographic region, size, and poverty level of the schools' associated districts. An initial sample of 5,035 schools was selected by sampling within strata. A principal survey was conducted in these schools to determine whether the schools could supply useful data for the SES. The results of the survey reduced the eligible sample pool to a total of 4,750 respondent schools. From this pool, schools were randomly selected. Some initially sampled schools refused to participate and were replaced by comparable schools in the same cell, where possible. This sampling procedure yielded a final sample of 243 schools. One school was later dropped from the study because it failed to return data after many attempts by the SES data collection staff.

Information from the SES is subject to both nonsampling and sampling error. Two possible sources of nonsampling error are nonreturn and/or participation and instrumentation. Nonparticipation substudies were conducted on selected school classification variables to insure the resulting sample was representative of the population. Nonsignificance was found for all comparisons: size, grade, range, race/ethnic, percentage reading below grade level, percentage eligible for Title I Poverty, Compensatory Funding, student body stabilized, and incidence of combined grades. Instrumentation nonsampling error concerns whether the standardized tests measure what is being taught in the classroom and, in turn, what is being learned by the students.

The sampling variability of the data presented in this report ranges from a standard deviation of 34.69 for the first grade fall math score to 82.30 for the sixth grade math spring score.

If questions exist concerning the Sustaining Effects Study, they can be directed to:

Janice Anderson
Office of Planning, Budget
and Evaluation
U.S. Department of Education
400 Maryland Ave., S.W.
Washington, D.C. 20202

13. Vocational Education Data System

The Vocational Education Data System (VEDS) is a coordinated effort administered by the National Center for Education Statistics (NCES) to acquire and maintain statistical data on programs under the jurisdiction of State boards of vocational education. This includes programs in both secondary and postsecondary institutions. Secondary schools include comprehensive high schools, vocational high schools and area vocational centers. Postsecondary institutions include 2- and 4-year institutions of higher education, noncollegiate postsecondary schools, correspondence schools and State correctional facilities.

VEDS, first implemented in 1978-79, is a universe survey of State educational agencies and agencies in the District of Columbia and outlying areas. Information is collected annually on students, programs, program completers and leavers, staff, facilities, and expenditures.

As a universe survey, VEDS is not subject to sampling error. Nonsampling error, however, may occur from nonreturn, nonresponse, and misclassification. Survey nonreturn for the VEDS information presented in this report is minimal, with all States submitting survey forms. However, the nonresponse to certain survey items was considerable. As with other universe surveys, the amount of information being gathered dictates that the opportunity certainly exists for misclassification. The States are responsible for the accuracy of all data submitted. Questionnaire responses are not certified, however, and the information is not considered to be an official financial report. Nevertheless, all data are reviewed and edited for reasonableness, and suspect responses are verified by contacting the submitter. In turn, the forms are reviewed by NCES and, if need be, returned to the States for correction. Standard data processing procedures are then carried out to assure that the edited responses are accurately transcribed to electronic form.

If questions exist concerning the Vocational Education Data System, they can be directed to:

Robert L. Morgan
Chief, Vocational Education Data Systems Section
National Center for Education Statistics
400 Maryland Ave., S.W. (Presidential Bldg.)
Washington, D.C. 20202

Table 1a

Recommended Allowance for Sampling Error of a Percentage in the Annual Survey of the Public's Attitudes Toward the Public Schools

	In Percentage Points (at 95 in 100 confidence level)						
	Sample Size						
	1,500	1,000	750	600	400	200	100
Percentages near 10	2	2	3	3	4	5	7
Percentages near 20	2	3	3	4	5	7	9
Percentages near 30	3	4	4	4	6	8	10
Percentages near 40	3	4	4	5	6	8	11
Percentages near 50	3	4	4	5	6	8	11
Percentages near 60	3	4	4	5	6	8	11
Percentages near 70	3	4	4	4	6	8	10
Percentages near 80	2	3	4	4	5	7	9
Percentages near 90	2	2	3	3	4	5	7

If comparisons are made across populations surveyed, the sampling variability shown in table 1b should be considered.

Table 1b

Recommended Allowance for Sampling Error of the Difference in the Annual Survey of the Public's Attitudes Toward the Public Schools

In Percentage Points
(at 95 in 100 confidence level)

Size of Sample	Percentages Near 20 or Percentages Near 80			
	750	600	400	200
750	5			
600	5	6		
400	6	6	7	
200	8	8	8	10

Size of Sample	Percentages Near 50			
	750	600	400	200
750	6			
600	7	7		
400	7	8	8	
200	10	10	10	12

Table 2

Estimated Percentages of the CPS Educational Attainment

Estimate	Base of Percentage (thousands)	Standard Error	90 Percent Confidence Interval
2 or 98	100	2.0	0 to 5.2*
	100,000	0.06	1.90 to 2.10
10 or 90	100	4.3	3.1 to 16.9
	100,000	0.14	9.78 to 10.22
50	100	7.2	38.5 to 61.5
	100,000	0.2	49.7 to 50.3

*The confidence interval for the larger values can be found by taking the complement of that shown, e.g. for 98 it would be 94.8 to 100.

Table 3

Estimated Number Participating (Number in Thousands) of the CPS Participation in Adult Education

Estimate	Standard Error	90 Percent Confidence Interval
10	4.5	2.8 to 17.2
50	10.2	33.7 to 66.3
500	30	452 to 548
50,000	253	49,595 to 50,405

Table 4

Estimated Percent Participating of the CPS Participation in Adult Education

Estimate	Base of Percentage (thousands)	Standard Error	90 Percent Confidence Interval
1 or 99*	50	2.4	0 to 4.8
	5,000	0.2	0.68 to 1.3
10 or 90	50	7.1	0 to 21.4
	5,000	0.7	8.9 to 11.1
50	50	11.8	31.1 to 68.9
	5,000	1.2	48.1 to 51.9

*The confidence interval for the larger values can be found by taking the complement of that shown, e.g., for 99 it would be 95.2 to 100.

Table 5

Estimated Number of Persons of the CPS School Enrollment

Estimated Number of Persons	Total Persons in Age-Sex Group	Standard Error	90 Percent Confidence Level
100	100	4.3	4.1 to 16.9
	1,000	4.5	2.8 to 17.2
	100,000	4.5	2.8 to 17.2
1,000	1,000	13.6	78.2 to 121.8
	10,000	14.3	77.1 to 122.9
	100,000	14.4	77.0 to 123.0
10,000	25,000	111.3	9,822 to 10,178
	100,000	136.3	9,782 to 10,218

Table 6

Estimated Percent Participating in Selected Programs of the High School and Beyond Study

Subclass	Estimate	Standard Error of Estimates	90 Percent Confidence Interval
All students or whites	10 (or 90)	.3	9.5-10.5 (89.5-90.5)
	30 (or 70)	.4	29.3-30.7 (69.3-70.7)
	50	.5	49.2-50.8
Males or females	10 (or 90)	.4	9.4-10.6 (89.4-90.6)
	30 (or 70)	.6	29.0-31.0 (69.0-71.0)
	50	.6	49.0-50.0
Blacks	10 (or 90)	.7	8.8-11.2 (88.8-91.2)
	30 (or 70)	1.1	28.2-31.8 (68.2-71.8)
	50	1.2	48.1-51.9
Hispanics	10 (or 90)	.8	8.7-11.3 (88.7-91.3)
	30 (or 70)	1.2	28.0-32.0 (68.0-72.0)
	50	1.3	47.8-52.2

Table 7

Approximate Coefficients of Variation for 1978 Recent College Graduates Survey

All Bachelor's Recipients		Education Majors	
Size of Estimate	Coefficient of Variation	Size of Estimate	Coefficient of Variation
750,000	.0101	125,000	.0281
500,000	.0133	100,000	.0318
250,000	.0213	75,000	.0372
150,000	.0302	50,000	.0465
100,000	.0399	30,000	.0617
75,000	.0485	20,000	.0771
50,000	.0640	15,000	.0904
30,000	.0908	10,000	.1130
15,000	.1458	7,500	.1324
10,000	.1923	5,000	.1656
7,500	.2341	3,000	.2195
5,000	.3089	2,000	.2745
3,000	.4380	1,000	.4022

Table 8

Maximum Differences Required for Significance (90 Percent Confidence Level) Between Sample Subgroups of the Status of the American Public School Teacher

Size of One Subgroup	Size of Subgroup						
	100	200	300	400	500	600	700
100	11.6	10.1	9.5	9.2	9.0	8.9	8.8
200	10.1	8.2	7.5	7.1	6.9	6.7	6.6
300	9.5	7.5	6.7	6.3	6.0	5.8	5.7
400	9.2	7.1	6.3	5.8	5.5	5.3	5.2
500	9.0	6.9	6.0	5.5	5.2	5.0	4.8
600	8.9	6.7	5.8	5.3	5.0	4.7	4.6
700	8.8	6.6	5.7	5.2	4.8	4.6	4.4

Table 9

Table of Standard Errors of the Survey of Teacher Demand and Shortages

Field of Assignment	Employed Teachers	Layoffs	Layoffs as Percent of Employed Teachers	Shortages	Shortages as Percent of Employed Teachers
Total	27,800	2,003	.1	1,643	.07
Preprimary	2,100	282	.3	426	.43
Primary and general elementary	12,000	839	.1	1,411	.16
Art	900	149	.3	31	.06
Biology	600	159	.5	45	.16
English language arts	2,300	230	.1	55	.03
Health, physical education	8,500	125	.1	70	.05
Special education	4,300	1,279	.2	401	.19
Vocational education	2,300	91	.1	72	.07

Definitions of Selected Terms

The following terms are defined as they generally apply in the text. Readers interested in more technical, detailed definitions should refer to the appropriate National Center for Education Statistics (NCES) Handbook

Absenteeism: Nonattendance of a student on a day or half day when school is in session.

Achievement test: An examination that measures the extent to which a person has acquired certain information or mastered certain skills, usually as a result of specific instruction.

Administrator: A staff member who has been given responsibility to manage or direct activities, or portions of activities, of a local education agency or of an educational institution.

Adult education: Courses and other organized educational activities taken by persons 17 years of age and over, excluding courses taken by full-time students in programs leading toward a high school diploma or an academic degree and occupational programs of six months or more duration. It includes all courses taken for credit by part-time students. Providers of instruction include not only public and private educational institutions, but also business and industry, governmental agencies, private community organizations, and tutors. (The definition applies specifically to data from the NCES Participation in Adult Education Survey.)

Advanced/honors courses: Special accelerated courses for students who have achieved a high standard of performance in a special subject area or who had generally high scholarship.

Affective measure: Test or other assessment instrument which deals with the feelings or emotions of a respondent with respect to a specific issue or issues.

Age distribution: The number or percentage of persons in each age category or classification group, usually presented in an age distribution table.

Assessment area: A particular aspect of behavior or ability which is evaluated or appraised by means of a test or other measurement instrument.

Aggregate United States: The 50 States, District of Columbia, and outlying areas—Puerto Rico, American Samoa, Guam, the Virgin Islands, and the Trust Territory of the Pacific Islands, and the Northern Mariana Islands. Some NCES surveys report data for the aggregate United States. However, data pertain to the 50 States and the District of Columbia, unless otherwise noted.

Average daily attendance: The aggregate days of attendance during a regular school term divided by the number of days school was in session.

Bachelor's degree: A degree granted for the successful completion of a baccalaureate program of studies, usually requiring at least 4 years (or equivalent) of full-time college-level study.

Blue-collar worker: A manual worker whose job deals with things and whose work is primarily physical, rather than mental or social.

Busing for racial balance: Transporting students from one neighborhood to another so that all schools in a district have about the same proportion of minority group students.

Buying power: The amount of goods and services that can be purchased with a given amount of money.

Central cities: The largest city with 50,000 or more inhabitants in a Standard Metropolitan Statistical Area (SMSA). A smaller city within an SMSA may also qualify if it has at least 250,000 inhabitants or has a population of one-third or more of that of the largest city and a minimum populatin of 25,000. An exception occurs where two cities have contiguous boundaries and constitute, for economic and social purposes, a single community of at least 50,000, the smaller of which must have a population of at least 15,000.

Church-related school: A school associated with a religious or church organization, e.g., a Catholic school is affiliated with the Roman Catholic Church.

Civil court case: Legal proceedings, remedies sought by legal action or suit, or reports of decisions of law cases which relate to private rights, as opposed to the body of law which deals with crimes and their punishments.

Civilian labor force: All persons in the labor force, who are not in the Armed Forces, whether they are classified as employed or unemployed.

Classroom teacher: A staff member assigned the professional activities of instructing students, in classroom situations, for which daily student attendance figures for the school system are kept.

Cohort: A group of individuals that have a statistical factor in common, e.g., year of birth.

College: A postsecondary school which offers general or liberal arts education, usually leading to a first degree. Junior colleges and community colleges are included under this terminology.

College enrollment: Enrollment in a course that leads to a bachelor's, master's, professional, or doctorate degree, excluding vocational certification. (This definition applies specifically to data collected by the Bureau of the Census, Current Population Surveys.

Competency-based certification: The general process by which the State (or agency or organization authorized by the State) provides a credential to an individual. Processes may require individuals to demonstrate a mastery of minimum essential generic and specialization competencies and other related criteria adopted by the board through a comprehensive written examination and through other procedures that may be prescribed by the board of educational examiners.

Computer-assisted instruction: Programmed instruction utilizing an electronic computer as the principal medium of instruction.

Constant dollars: Dollar amounts that have been adjusted by means of price and cost indexes to eliminate inflationary factors and allow direct comparison across years.

Core current expenditures: Measure of total expenditures excluding transportation and food service costs, used in interstate comparisons.

Corporal punishment: Infliction of physical punishment to the body of a student by a school employee for disciplinary reasons.

Current dollars: Dollar amounts that have not been adjusted to compensate for inflation.

Current funds expenditures (higher education): Money spent to meet current operating costs including salaries, wages, utilities, student services, public service, research libraries, scholarships and fellowships, auxiliary enterprises, hospitals, and independent operations. Excludes loans, and capital expenditures, and investments.

Current funds revenues: Money received during the current fiscal year from revenue which can be used to pay obligations currently due, and surpluses reappropriated for the current fiscal year.

Direct expenditures: Payment to employees, suppliers, contractors, beneficiaries, and other final recipients of governmental payments, i.e., all expenditures other than intergovernmental expenditures. (This definition applies specifically to data collected by the Bureau of the Census, Government Finance Surveys).

Discipline problems: Issues or matters relating to the enforcement of order or obedience to rules which are marked by considerable difficulty with respect to their proper settlement.

Doctor's degree: An earned degree carrying the title of Doctor. The Doctor of Philosophy degree (Ph.D.) is the highest academic degree, and requires mastery within a field of knowledge and demonstrated ability to perform scholarly research. Other doctorates are awarded for fulfilling specialized requirements in professional fields, such as education (Ed.D.), musical arts (D.M.A.), business administration (D.B.A.), and engineering (D.Eng. or D.E.S.). Many doctor's degrees in both academic and professional fields require an earned master's degree as a prerequisite. First-professional degrees, such as M.D. and D.D.S. are counted separately and are not included under this heading.

Dropouts: Persons not enrolled in school and not high school graduates. (This definition applies specifically to data collected by the Bureau of the Census, Current Population Surveys.)

Earnings: The sum of wages, salaries, and net income from self-employment.

Education major: A student whose program of studies gives primary emphasis to subject matter in the area of education and who, according to his/her institutional requirements, concentrates a minimum number of courses or semester hours of college credit in the specialty of education.

Educational attainment (years of school completed): The highest grade of regular school attended and completed.

Elementary school: A school classified as elementary by State and local practice and composed of any span of grades not above grade 8. A preschool or kindergarten school is included under this heading only if it is an integral part of an elementary school or a regularly established school system.

Employed: All civilians who did any work at all as paid employees, or who worked in their own business or profession or on their own farm, or who worked 15 hours or more as unpaid workers on a farm or in a business operated by a member of the family. The employed include as well all those who were not working but who had jobs or businesses from which they were temporarily absent, whether or not they were paid for time off by their employers, and whether or not they were seeking other jobs.

Endowment: The portion of an institution's income derived from donations.

Enrollment: The total number of entering students in a given school unit.

Expenditures: Charges incurred, whether paid or unpaid which are presumed to benefit the current fiscal year. For elementary/secondary schools, these include all charges for current outlays for education, plus capital outlays and interest on school debt. For institutions of higher education, these include current outlays plus capital outlays. For government, these include charges net of recoveries and other correcting transaction—other than for retirement of debt, investment in securities, extension of credit, or as agency transactions. Government expenditures include only external transactions, such as the provision of perquisites or other payments in kind. Aggregates for groups of governments exclude intergovernmental transactions among the governments.

Expenditures per student: Charges incurred for a particular period of time divided by a student unit of measure, e.g., average daily attendance or average daily membership.

Family: A unit consisting of a household head and one or more other persons living in the same household who are related to the head by blood, marriage, or adoption; all persons in a household who are related to the head are regarded as members of his/her family.

First-professional degree: A degree that signifies both (a) completion of the academic requirements for beginning practice in a given profession and (b) a level of professional skill beyond that normally required for a bachelor's degree. This degree usually is based on a program requiring at least 2 academic years of work prior to entrance and a total of at least 6 academic years of work to complete the degree program, including both prior-required college work and the professional program itself. First-professional degrees are awarded in fields such as dentistry (D.D.S. or D.M.D.), medicine (M.D.), optometry (O.D.), osteopathic medicine (D.O.), podiatric medicine (D.P.M.), veterinary medicine (D.V.M.), law (J.D.), and theological professions (M.Div. or M.H.L.).

First-time college students: Students not previously enrolled in any institution of higher education.

Flow-through monies: Funds which constitute neither a receipt nor an expenditure of a State department or agency, rather, such funds are distributed by a State department as an intermediary; e.g., Federal and State support funds are flow-through monies.

Full-time personnel: Employees whose positions require them to be on the job on school days throughout the school year, at least the number of hours the schools are in session, or, for higher education, those members of the staff of an educational institution who are employed on a full-time basis and whose major regular assignment is instruction.

Full-time students (higher education): Students enrolled in courses with total credit equal to at least 75 percent of the normal full-time course load.

General educational development (GED) program: Academic instruction to prepare persons to take the high school equivalency examination.

GED recipients: Persons who have obtained certification of high school equivalency because they have met State requirements and passed an approved exam, which is intended to provide an appraisal of their achievement or performance in the broad subject matter areas usually required for high school graduation.

Geographic regions: 1) Regions used by the U.S. Department of Commerce, Bureau of Economic Analysis and by the National Assessment of Educational Progress, as follows:

Northeast
Connecticut
Delaware
District of Columbia
Maine
Maryland
Massachusetts
New Hampshire
New Jersey
New York
Pennsylvania
Rhode Island
Vermont

Central
Illinois
Indiana
Iowa
Kansas
Michigan
Minnesota
Missouri
Nebraska
North Dakota
Ohio
South Dakota
Wisconsin

Southeast
Alabama
Arkansas
Florida
Georgia
Kentucky
Louisiana
Mississippi
North Carolina
South Carolina
Tennessee
Virginia
West Virginia

West
Alaska
Arizona
California
Colorado
Hawaii
Idaho
Montana
Nevada
New Mexico
Oklahoma
Oregon
Texas
Washington
Wyoming

2)Regions and divisions used by the U.S. Department of Commerce, Bureau of the Census, in Current Population Survey tabulations, as follows:

Northeast

(New England)
Maine
New Hampshire
Vermont
Massachusetts
Rhode Island
Connecticut

(Middle Atlantic)
New York
New Jersey
Pennsylvania

North Central

(East North Central)
Ohio
Indiana
Illinois
Michigan
Wisconsin

(West North Central)
Minnesota
Iowa
Missouri
North Dakota
South Dakota
Nebraska
Kansas

South

(South Atlantic)
Delaware
Maryland
District of Columbia
Virginia
West Virginia
North Carolina
South Carolina
Georgia
Florida

(East South Central)
Kentucky
Tennessee
Alabama
Mississippi

(West South Central)
Arkansas
Louisiana
Oklahoma
Texas

West

(Mountain)
Montana
Idaho
Wyoming
Colorado
New Mexico
Arizona
Utah
Nevada

(Pacific)
Washington
Oregon
California
Alaska
Hawaii

3) Regions used by the National Education Association, as follows:

Northeast
Connecticut
Delaware
District of Columbia
Maine
Maryland
Massachusetts
New Hampshire
New Jersey
New York
Pennsylvania
Rhode Island
Vermont

Middle
Illinois
Indiana
Iowa
Kansas
Michigan
Minnesota
Missouri
Nebraska
North Dakota
Ohio
South Dakota
Wisconsin

Southeast
Alabama
Arkansas
Florida
Georgia
Kentucky
Louisiana
Mississippi
North Carolina
South Carolina
Tennessee
Virginia
West Virginia

West
Alaska
Arizona
California
Colorado
Hawaii
Idaho
Montana
Nevada
New Mexico
Oklahoma
Oregon
Texas
Utah
Washington
Wyoming

Handicapped: A "handicapped" person is one who has one or more of the exceptionalities defined below, whether or not he/she requires special education.

Educable mentally retarded: A condition of mental retardation which includes students who are educable in the academic, social, and occupational areas even though moderate supervision may be necessary.

Trainable mentally retarded: A condition of mental retardation which includes students who are capable of only very limited meaningful achievement in the traditional basic academic skills but who are capable of profiting from programs of training in self-care and simple job or vocational skills.

Hard of hearing: A hearing impairment, whether permanent or fluctuating, which adversely affects a student's educational performance but which is not included under the definition of "deaf" in this section.

Deaf: A hearing impairment which is so severe that the student is impaired in processing linguistic information through hearing, with or without amplification, which adversely affects educational performance.

Speech impaired: A communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, which adversely affects a student's educational performance.

Visually handicapped: A visual impairment which, even with correction, adversely affects a student's educational performance. The term includes both partially seeing and blind children.

Seriously emotionally disturbed: A condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree, which adversely affects educational performance: an inability to learn which cannot be explained by intellectual, sensory, or health factors; an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; inappropriate types of behavior or feelings under normal circumstances; a general pervasive mood of unhappiness or depression; or a tendency to develop physical symptoms or fears associated with personal or school problems. The term includes children who are schizophrenic or autistic.

Orthopedically impaired: A severe orthopedic impairment which adversely affects a student's educational performance. The term includes impairments caused by congenital anomaly, disease, and from other causes.

Other health impairment: Limited strength, vitality, or alertness, due to chronic or acute health problems such as a heart condition, tuberculosis, rheumatic fever, nephritis, asthma, sickle cell anemia, hemophilia, epilepsy, lead poisoning, leukemia, or diabetes, which adversely affects a student's educational performance.

Specific learning disability: A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental asphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, or of environmental, cultural, or economic disadvantage.

Deaf-blind: Concomitant hearing and visual impairments the combination of which causes such severe communication and other developmental and educational problems that they cannot be accommodated in special education programs solely for deaf or blind students.

Multihandicapped: Concomitant impairments (such as mentally retarded-blind, mentally retarded-orthopedically impaired, etc.), the combination of which causes such severe educational problems that they cannot be accommodated in special education programs solely for one of the impairments. The term does not include deaf-blind students. This category includes those students who are severely or profoundly mentally retarded.

Head of household: The individual assuming responsibility for all persons occupying a single housing unit, usually a family group.

High school: A secondary school offering the final years of high school work necessary for graduation, usually including grades 10, 11, 12 (in a 6-3-3 plan) or grades 9, 10, 11, and 12 (in a 6-2-4 plan).

Higher education: Study beyond the secondary school level at an institution that offers programs terminating in an associate, baccalaureate, or higher degree.

Intermediate sources of revenue: Funds collected by an intermediate administrative unit or a political subdivision between local education agencies and the State and distributed to LEA's in amounts different from those which are collected within the subsystem.

Junior high school: A separately organized and administered secondary school intermediate between the elementary and senior high schools, usually including grades 7, 8, and 9 (in a 6-3-3 plan) or grades 7 and 8 (in a 6-2-4 plan).

Labor force: All persons who are either employed as civilians, unemployed, or in the Armed Forces during a specified time.

Labor force participation rate: The labor force participation rate is the percent of the civilian noninstitutional population in the labor force.

Legislature: An organized body which has the authority to make laws for a political unit and which often exercises other functions, such as control of administration.

Local education activities: Purposeful actions, usually performed in conjunction with the execution of responsibilities, by staff members of an educational agency at the local level which exists primarily to operate schools or to contract for educational services.

Market value: A price at which both buyers and sellers are willing to do business.

Master's degree: An earned degree carrying the title of Master. One type of Master's degree—including the Master of Arts degree (M.A.) and the Master of Science degree (M.S.)—usually is awarded in the liberal arts and sciences for advanced scholarship in a subject field or discipline and demonstrated ability to perform scholarly research. A second type of master's degree is awarded for the completion of a professionally-oriented program (e.g., in education (M.Ed.), in business administration (M.B.A.), in fine arts (M.F.A.), in music (M.M.), in social work (M.S.W.), in public administration (M.P.A.), and in other fields). A third type of master's degree is awarded in professional fields for study beyond the first-professional degree (e.g., the Master of Laws (LL.M.) and Master of Science in various medical specializations).

Mean test score: The score obtained by dividing the total sum of scores of all individuals in a group by the number of individuals in that group.

Median income: The amount which divides a distribution into two equal groups, one having incomes above the median, and the other having incomes below the median.

Metropolitan-nonmetropolitan residence: The population residing in standard metropolitan statistical areas (SMSA's) constitutes the metropolitan population. Except in New England, an SMSA is a county or group of contiguous counties which contains at least one city of 50,000 inhabitants or more, or "twin cities" with a combined population of at least 50,000. In addition to the county, or counties, containing such a city or cities, contiguous counties are included in an SMSA if, according to certain criteria, they are essentially metropolitan in character and are socially and economically integrated with the central city. In New England, SMSA's consist of towns and cities, rather than counties.

Minimum competency testing: Measuring the acquisition of competence or skills to or beyond a certain specified standard.

Newly qualified teacher: A person who has met the specific requirements of a State or other authorizing agency, has received certification from a State, regional, or national accrediting body, and thus is considered eligible and qualified to instruct students.

Noncollegiate postsecondary school: An institution beyond the high school level that does not offer programs terminating in an associate, a baccalaureate, or a higher degree.

Nonrevenue receipts: Amounts received which either incur an obligation that must be met at some future date or change the form of an asset from property to cash and therefore decrease the amount and value of school property. Money received from loans, sale of bonds, sale of property purchased from capital funds, and proceeds from insurance adjustments constitute most of the nonrevenue receipts.

Not in the labor force: Any civilian, 14 years old or over, who is not classified as employed or unemployed (i.e., seeking work), including any person engaged only in own-home housework, attending school, or unable to work because of long-term physical or mental illness; persons who are retired or too old to work; seasonal workers for whom the survey week fell in an off-season, and the voluntarily idle.

Part-time students: Students who are carrying less than a full course load, as determined by the State, local school system, or institution.

Preprimary program: A set of organized educational experiences for children attending prekindergarten and kindergarten classes including Head Start programs. Such programs may be offered by a public or private school or by some other agency. Custodial care in private homes is not included. (This definition applies specifically to data collected by the Bureau of the Census, Current Population Surveys.)

Primary school: A separately organized and administered elementary school for students in the lower elementary grades, usually including grade 1 through grade 3 or the equivalent, and sometimes including preprimary years.

Private school: A school which is controlled by an individual or by an agency other than a State, a subdivision of a State, or the Federal government, usually which is supported primarily by other than public funds, and the operation of whose program rests with other than publicly elected or appointed officials.

Proprietary school: An educational institution that is under private control and whose profits derived from revenues are subject to taxation.

Public school: A school operated by publicly elected or appointed school officials in which the program and activities are under the control of these officials and which is supported primarily by public funds.

Racial/ethnic group: Classification indicating general racial or ethnic heritage based on self-identification as in data collected by the Bureau of the Census or on observer identification as in data collected by the Office for Civil Rights. These categories are in accordance with the Office of Management and Budget standard classification scheme presented below:

White: A person having origins in any of the original peoples of Europe, North Africa, or the Middle East.

Black: A person having origins in any of the black racial groups of Africa.

Hispanic: A person of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race.

Asian or Pacific Islander: A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes, for example, China, India, Japan, Korea, the Philippine Islands, and Samoa.

American Indian or Alaskan Native: A person having origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition.

Regular day school: State-approved elementary/secondary school offering at least one grade beyond kindergarten, attended by students during a part of the day, as distinguished from a residential school. Not included in this category are residential schools for exceptional children, Federal schools for Indians, federally operated schools on Federal installations, and subcollegiate departments of institutions of higher education.

Religiously affiliated school: A private school which in most cases a parent church group exercises some control over or provides some form of subsidy to the school. Catholic schools include those affiliated with the Roman Catholic Church, including the "private" Catholic schools operated by religious orders. Other affiliation includes schools associated with other religious denominations. An unaffiliated school is usually privately operated or under control of a board of trustees or directors.

Remedial courses: Planned diagnostic and remedial activities for individual students or groups of students, designed to correct and prevent further learning difficulties which interfere with the student's expected progress in developing skills, understandings, and appreciations in any of several required courses.

Retrenchment: The act or process of reducing expenses.

Revenues: All funds received from external sources, net of refunds, and correcting transactions. Noncash transactions such as receipt of services, commodities, or other receipts "in kind" are excluded, as are funds received from the issuance of debt, liquidation of investments, and nonroutine sale of property.

Salary: The total amount regularly paid or stipulated to be paid to an individual, before deductions, for personal services rendered while on the payroll of a business or organization.

School: A division of the school system consisting of students comprising one or more grade groups or other identifiable groups, organized as one unit with one or more teachers to give instruction of a defined type, and housed in a school plant of one or more buildings.

School district: An educational agency at the local level that exists primarily to operate public schools or to contract for public school services. This term is used synonymously with the terms "local basic administrative unit" and "local education agency."

Secondary school: A school comprising any span of grades beginning with the next grade following an elementary or middle school and ending with or below grade 12.

Source of funds: Identifies the agency, governmental or otherwise, which appropriates the money used by a local school or local educational agency.

Special education: Direct instructional activities or special learning experiences designed primarily for students identified as having exceptionalities in one or more aspects of the cognitive process and/or as being underachievers in relation to the general level or mode of their overall abilities. Such services usually are directed at students with the following exceptionalities: (1) physically handicapped; (2) emotionally handicapped; (3) culturally different, including compensatory education; (4) mentally retarded; (5) students with learning disabilities. Programs for the mentally gifted and talented are also included in some special education programs.

Standardized test: A test composed of a systematic sampling of behavior, having data on reliability and validity, administered and scored according to specific instructions, and capable of being interpreted in terms of adequate norms.

State educational agency operations: Activities performed for the purpose of executing the responsibilities of the State educational agency, an organization established by law for the primary purpose of carrying out at least a part of the educational responsibilities of a State.

Student: An individual for whom instruction is provided in an educational program under the jurisdiction of a school, school system, or other educational institution. No distinction is made between the term "student" and "pupil", the term "student" is used to include individuals at all instructional levels.

Student education expenditures (higher education): Expenditures for formal instruction and activities that are most closely related to instruction. Includes instruction and research that are part of regular instructional services (departmental research), extension and public service, libraries, physical plant operation and maintenance, general administration, and other sponsored activities.

Teaching candidate: Student taking a course of studies which is designed to prepare him/her for the teaching profession and which usually leads to the attainment of a teaching certificate, approved by a State, regional, or national accrediting body.

Teaching machine: A device for presenting programmed instruction.

Teaching method: A systematic plan, procedure, or approach followed in presenting instructional material, for the purpose of attaining an instructional or education objective.

Total money income: The algebraic sum of money wages and salaries, net income from self employment, and income other than earnings.

Tuition and fees: A payment or charge for instruction, or compensation for services, privileges, or for the use of equipment, books, or other goods.

Undergraduate students: Students registered at an institution of higher education who have not completed requirements for a bachelor's degree.

Unemployed: Civilians who, during a survey period, had no employment but were available for work and (1) had engaged in any specific jobseeking activity within the past 4 weeks, or (2) were waiting to be called back to a job from which they had been laid off, or (3) were waiting to report to a new wage or salary job within 30 days.

Unemployment rate: The number of unemployed persons seeking employment as a percent of the civilian labor force.

Vocational rehabilitation service: The service of preparing disabled persons for remunerative employment through diagnosis, guidance, physical restoration, training, and placement.

Vocational/technical education: Education in one or more semiskilled, skilled, or technical occupations, provided by a school which is separately organized under the direction and management of an administrator.

Wages: Total money earnings received for work performed as an employee during the income year.

White-collar workers: Professional, technical, sales, clerical and kindred workers; managers and administrators, except farm.

Year-round full-time workers: Persons who worked primarily at full-time civilian jobs (35 hours or more per week) for 50 weeks or more during the preceding calendar year.

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